

DE BOW'S REVIEW.

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ANCIENT SLAVERY.*

There is one plain fact to start from, in regard to which we agree with the professor and his fellow believers, and but one. This is that slavery, in name and in fact, existed among the Greeks, Romans, and other ancient nations, and that it does not exist nominally in France and Great Britain, and the northern portion of the United States. All that has been said about the degradation of labor in the one period, and its dignity in the other, is rhetoric and rhodomontade.

When the next step is taken, and it is asserted that the presence of slavery and the low estimation of labor degraded the citizens, and impoverished the ancient states, we hesitate before giving our assent to these positions. We cannot help remembering that slavery formed the basis of the Spartan institutions during the whole period of Spartan ascendancy and heroism ; that much of the agriculture, trade, commerce, finance, and manufactures, were in the hands of slaves during all the generations of Athenian triumph and glory ; that when *Æschylus* composed his tragedies, and *Pindar* sung his odes, and *Thucydides* wrote his history, and *Plato* delivered his divine philosophy, and *Demosthenes* spoke, and *Aristotle* mastered, collected, expanded, reformed, and multiplied all knowledge, slavery was universal. The battles of Thermopyle and Salamis, of Platea and Mycale were fought by slaveholders, and it is not easy to see how slavery degraded the Greeks. It was a senate of slaveowners that the Gauls found in the porticoes of Rome ; it was slaveowners who conquered the world, legislated for all succeeding ages, and laid the broad foundations of modern civilization and modern institutions. We remember, too, that, when *Hannibal* overran Italy and threatened Rome, the Car-

* Concluded from November No.

thagicians held numerous slaves, and even prosecuted the slave-trade with energy and profit; and that the soldiers who composed the armies of Hannibal were drafted from countries where slavery prevailed. In these facts we do not discover any convincing evidence that slavery either degraded the citizens or impoverished the state. There were other causes at work much more competent to produce that lamentable result. The abuses of popular government, the venality of electoral votes, the increase of wealth, luxury, and rapacity, and the corroding influences of universal greed, were much more marked and efficient elements of corruption. It is to these causes that the ancients, Livy and Tacitus, attributed the decay of Roman morals and Roman stability. It is to the like causes that the ruin of Rome is ascribed by Montesquieu, notwithstanding his reference of Roman repugnance to labor, to the employment of slaves.* It is to the avarice of the wealthy and their oppression of the poor, and not to slavery, that Salvian, the best interpreter of the last scenes of Roman decay, assigned the impotence of the western empire against the northern barbarians.† It was not slavery that generated these evils, but the decay of public and private virtues which led to the inordinate extension and abuse of slavery. The same evils prevail in England and France, where slavery is a heinous sin; and there pauperism, mendicity, the fever of trade and competition, and the consequent taxation, direct, indirect, and industrial, are consuming the forces of the nations, and sensualizing one part of the population while it brutalizes the mass. There are scarcely any mendicants in Turkey;‡ we suppose there are none in Russia; there are none in the southern States except visitors from free labor communities; but England and France, and other states enjoying unadulterated free labor, are overrun, and will be eaten up by the increasing army of paupers and beggars. For these reasons we doubt whether it was slavery which degraded the citizens of the ancient world, exhausted the public resources, and undermined the government.

* Montesquieu. *Grandeur et Décadence des Romains*, chap. X.

† “Nulla siquidem major pauperculorum est depopulatio, quam potestas. Ad hoc enim honor a paucis emitur, ut cunctorum vastatione solvatur. ** Ut pauci illustrentur, mundus evertitur. Unius honor, orbis excidium est.” De Gubernat. Dei. lib. iv, c. iv, cf. c. xv, lib. v, c. iv, viii, lib. vii, c. xv.

‡ “The only places where Turkish beggars are seen is the area or vicinity of a mosque, and even here very few obtrude themselves; forming a strong contrast to the multitudes that beset houses of Christian worship. Those who with us are disabled by age or sickness, are in Turkey supported by their masters, either because they are slaves, or because the charity of the Osmanli will not suffer his brother to want,” &c.—Walsh. *Constantinople and the Seven Churches of Asia Minor*, page 39.

The same doubts, generated by the like evidences, arrest us before acquiescing in the common assumption, that the slaves displaced the free laborers of antiquity, and destroyed the population, the industry, and the agriculture of the ancient nations.

"The evil effects of this gigantic system of slavery were gradually developing themselves. * * * But the system was gradually working its own ruin, and with it the ruin of the empire. Slavery made labor disreputable. Slaves occupied the positions, and were engaged in the pursuits which might have furnished employment for the poor common people. Almost the only occupation left for the poor Roman was agriculture, and from this he was finally driven by the competition of the wealthy landholder, who cultivated his estate by the unpaid labor of slaves."

We will not insist upon the unintentional admission that the ruin of the system of slavery was the ruin of the empire; nor ask where was the employment for the poor if they had been exposed to the competition of the emancipated slaves. We have cited the passage for a different purpose, and with a more liberal object. In it the professor has condensed the main allegations against ancient slavery. But substitute the word machinery for slavery, and it is applicable to the most advanced civilization of the present century. It could not, therefore, be a just censure of slavery any further than it was a censure of machinery also. There is one important difference, however, to be noted. The present complaint is the redundancy of the population; the accusation against antiquity is its scantiness. The ruin which is charged upon the latter is equally menaced by the former, and it is not easy to discern the advantage which starvation from the excessive number of the hungry enjoys over starvation from the diminution of the producers. Repletion, as well as inanition, may occasion death; and between the ancient and the modern systems there is only a choice of the modes of evil. The disciples of Malthus reprobate marriage and the increase of families, and in some cases have been tempted into the recommendation of general vice and demoralization.* The wealthy classes alone listen to the prescription, and accept celibacy as the condition and price of luxury and licentiousness. The Roman emperors endeavored to arrest both depravity and depopulation by encouraging matrimony, and rewarded the augmentation of families; for at that time, too, the independent classes avoided the expenses and embarrass-

* Rickards on Population, ch. viii, p. 192-6. Proudhon, *Contrad. Econ.* chap. xiii, § 1, vol. ii, pp. 336, 347.

ments of married life, that they might indulge themselves in selfishness and sensualism. The corruptions of Roman society and of society in France, England, and the northern States were identical ; they manifested themselves in the former as they now manifest themselves in the latter communities : in all greed, rapacity, and the utter disregard, practical and theoretical, of the marriage relation have been significant phenomena. In the southern States these vices exist only to a limited extent as fatal imitations of the follies of a different social organization. Was it slavery that produced in Rome and Europe the opposite recommendations of policy, and the identical result, but did not occasion any such measures or effects in modern slaveholding communities ?

It is not true that slavery produced depopulation, or displaced the free laborers in the ancient world. These were concurrent, and perhaps connected phenomena, but slavery was not the prime cause of the evil ; it was only a partial effect in common with the other effects of a higher cause. That cause was rapacity, and the intestine strife which it generated. The Peloponnesian, the Theban, the social wars, the Macedonian conquests, and the rivalries of the successors of Alexander ; the campaigns of the *Ætolian* and *Achæan* leagues, and the rest of the long series of domestic discords, depopulated Greece—and there is no period in its history when it can be said that free labor was displaced by slavery. This would have been an inversion of the course of social development. With the progress of society free labor supplants slavery, as being less costly, more intelligent, and therefore more efficient in occasioning the multiplication of products. The deficiency of labor is the preliminary condition of slavery ; the augmentation of labor is the parent of inevitable emancipation ; therefore, unless labor be deficient, slavery can neither come into existence nor continue in vogue. It is a direct corollary from these principles that slavery cannot displace free labor, and cannot of itself be a cause of depopulation ; and that, therefore, it did not generate these effects in the Roman empire.

The abstract deduction of this conclusion from general principles may be resisted as being theoretical. We will recur to history and facts. Under the Roman government there is no evidence of the displacement of free labor by slavery. The free laborers disappeared unquestionably, and slaves filled the places that had been abandoned, or never occupied. But it is an assumption to represent the latter as the cause, and the former as the effect. The greed of the wealthy monopolized the public lands, and depressed the mass of the

citizens, but it was not slavery that produced this rapacity, for the same tendencies are manifested by the landlords and manufacturers of Great Britain,* and the capitalists of France, and even of the free States of northern America. No such tendency is yet distinctly pronounced in the southern States. The free laborers of Rome disappeared, but it must be ascertained what became of them before it can be properly asserted that they were displaced by the slaves. Our anti-slavery professor gives the Gracchi great credit for their efforts to avert the dangers of slavery and create an independent yeomanry as a check on the wealthy aristocracy, and their monopolizing appetencies. We assent to the latter part of the eulogy; to the former part we do not assent. When the younger Gracchus harangued the people, a slave stood behind him with a fife to give him the proper key in which to pitch his voice. Caius Gracchus was scarcely dreaming at that moment of abolishing or mitigating slavery. What the legislation of the Gracchi really was, what its objects, and what its effects, exercised the industry and research of Niebuhr, and cannot be satisfactorily expressed in the brief summary of a couple of sentences. Slavery had little or nothing to do with it; but one of the consequences of the Sempronian laws, apprehended by their opponents, was to seduce the poorer citizens from industrial avocations, and thus leave a vacancy which was soon filled by slaves.† We prove this point by direct citation from the classics; we shall not borrow at second-hand, nor trust to Becker and Blair, and Walton, and Edwards—("Powers eternal! such names mingled!") The rapacity of the rich and powerful was imprudently counterbalanced by the gratuitous distribution of support to the poorer citizens, and this temptation withdrew them from labor. The provisions of the poor, as the exactions of the proconsuls and proprætors, were drawn from the plunder of the conquered provinces; and thus the whole earth was despoiled and impoverished to satiate the

* The proprietors of land in England, Scotland, and Ireland are estimated at only 30,000 by Dove.—Theory of Human Progression, chap. iii, sect. iii, p. 358.

† "Agrarium Ti. Gracchus legem ferebat. Grata erat populo; fortuna constitui tenniorum videbantur. Nitebantur contra optimates, quod ea discordiam excitari videbant: et quum locupletes possessionibus diurnis moverentur spoliari rempublicam propugnatoribus arbitrabantur. Frumentariam legem C. Gracchus ferebat. Jucunda res plebi Romanae. Victor enim suppeditabatur large sine labore. Repugnabant boni quod ab industria plebem ad desidiam avocari putabant, et ævarium exauriri videbatur." Cic. Or. pro Sextio, c. xlvi, sec. 103.

The slave-holders opposed these laws, because the effects would be the reverse of what the professor represents, and would do what he ascribes to slavery, abolish free labor and impoverish the state.

covetous idleness of the Romans, patrician, plebeian, and proletarian.* Luxury and avidity, bribery and laziness, impoverished the world, and substituted slavery only for the free labor which had already renounced work. It was the licentious greed, the peculating and hungry indolence of the Romans that destroyed the free labor of Italy.†

The essay on the Athenian Republic, the Dialogues of Plato, and the remains of the Attic Comedians, explain the manner in which the Athenians were tempted away from industrial pursuits by the various distributions to them of the public revenues. The Athenian Demus consumed in haughty and reckless idleness the funds which should have sustained the defences of the state; and the forces of the republic were in consequence unprofitably employed in plundering and alienating the allies, instead of resisting Spartan, Asiatic, or Macedonian aggression. The decline of Athens and the other Greek states is perfectly intelligible, without having recourse to the imaginary influences of slavery; nor is there anything in either the ancient authors, or the political conditions and phases of their decay, to render it necessary or even reasonable to attribute the result in any great measure to slavery.

In the case of Rome we witness the repetition of the same destructive agencies which overthrew the liberties and prosperity of Greece, and which have in all cases been the principal causes of national decline. It is ridiculous to listen to the arguments of modern abolitionists, and to hear them citing the laws of the Gracchi as ineffectual attempts to repress the growth of slavery, when measures, identical in spirit, similar in form, and much more extensive in their application than the system of land distribution assailed by the Gracchi, are recommended and urged by the ultra political economists of Great Britain as a redress for the existing evils there. The Roman system, which the Gracchi impugned, was to retain the ownership of the greater part of the conquered lands in the hands of the state, and to lease out the lands themselves to individuals. The system lately recommended by Mr. Dove and Mr. Herbert Spencer‡ is for the

* C. Gracchus, on his return from Sardinia, remarked: "Itaque, Quirites, cum Romam prefectus sum, zonas, quas plenas argenti extuli, eas ex provincia manes retuli. Alii viri amphoras, quas plenas tulerunt, eas argento repletas domum reportaverunt." Aul. Gellius. Noct. Alt., lib. xv, c. xii, sec. 4.

† This explanation is fully sustained by Sallust: Cat. c. x-xiii *Fragm. Hist. ap. Augustin. Civ. Dei.* lib. ii, c. xviii. Montesquieu, *Grandeur et Décadence des Romains*, ch. x.

‡ Dove, *Theory of Human Progression*. Dove, *Elements of Political Science*. Spencer, *Social States*. To some expedient of the sort Proudhon also seems to be inclined. Extremes meet.

state to assume the ownership of all lands and to hire them out to the highest bidder. Either the early Roman plan was not intrinsically wrong, while the Gracchi were, in which case the eulogy of the Gracchi is absurd, or the Gracchi were right; but the modern abolitionizing political economists are wrong, and therefore contradict the doctrine they assert. They are thus suspended on the points of a dilemma; they can turn neither to one side nor to the other without confusion and in consequence; but whatever their option may be, slavery has nothing to do with the determination of the question, as this has equally arisen, and elicited contradictory solutions where slavery did and where slavery did not exist. The entire logical procedure of the abolitionists is involved in an inextricable maze of absurdities, inconsistencies, and misapprehensions, and its only evidence is a long array of unauthenticated or mistaken facts.

Slavery did not, as has been habitually asserted, depopulate the Roman territory and undermine agriculture. It was an accompaniment of these results, but not a cause, or, at any rate, only a subordinate and co-operating cause. The professor, to whom we are ostensibly replying, repeats the lesson he has learned from the frequent teaching of others, that "the ravages of this war," (with Spartacus and the insurgent slaves,) "were so great that Italy can hardly be said to have recovered from its effects during the time of the emperors. The free population was almost entirely extirpated, and the region divided into large estates, which mainly served for pasture." "From the time of the civil wars, slavery went on slowly maturing its ruin. It impoverished the land, so that Rome was dependent on the granaries of Africa for her bread."

If the slaves in a servile war extirpated the free population, it should be obvious that free labor was not destroyed by the substitution of slave labor. But we waive any captious advantage that might be derived from looseness or inaccuracy of expression. It is solely from considerations of convenience that we quote from the professor's essay. We oppose the statements and arguments adduced by him, not as being his, for they are nearly as common property as air and running water, but because we must take them from some creditable hand. He only serves at present as the man of straw, that our arrows may not fly without being directed at some mark. We no more think of censuring him individually than we would of punishing a child who had stumbled over a broken bottle and lacerated himself by the mischance. What we are contending against is a bundle of popular arguments and

vulgar delusions which we find in the professor's industrious compilation, as almost everywhere else.

Now we venture to assert that the desolation and depopulation of Italy were not due to the servile wars, whatever temporary evils they may have inflicted ; that Italy did recover, not merely from their effects, but from its first great devastation, in the time of the emperors ; that it was not by these wars that the free population was extirpated, nor in consequence of them that southern Italy was divided into large estates, or that these were converted into pasture. The ground first assumed is abandoned when the alleged disastrous effects of slavery are dated from the civil instead of from the servile wars ; nevertheless, we also venture to assert that the agriculture of Italy was not destroyed by slavery, and that it was not slavery which rendered Rome dependent upon Africa for bread.

We believe we have traversed every statement, not only in form and manner as alleged, but in spirit as intended ; and have produced a long array of historical blunders. They are excusable, for they are traditional ; and tradition is a horrible offence in many eyes. But there is not the same excuse for the professor's representation, that it was in consequence of the humane effect of Christian laws that the church became a sanctuary for the slave of a cruel master, after having stated that Antoninus had previously introduced a similar practice ; nor for attributing this beneficent measure to Antonine, when the like privilege was already established at the commencement of the reign of Nero.*

We proceed to maintain our numerous traverses. The civil wars of Marius, and Sylla, and Cuina, and Carbo, their proscriptions, decimations, and devastations, succeeded the first servile war. The war with Spartacus was followed by the conspiracy of Catiline and its consequences, and by the bloodshed, proscriptions, disasters, and exterminations of the first and second triumvirates. It was to the struggle between Pompey and Cæsar that the ancients attributed the depopulation of Italy.† It produced throughout the Roman dominions even greater desolation than the war of the roses afterwards occasioned in England. The population had been rapidly diminishing from various causes before, but this completed the disaster. If the object of Julius Cæsar's celebrated

* " *Servis ad statuam licet configere*," &c.—Seneca, *De Clement.* lib. I, chap. xviii, sec. 2.

† Not one word of Spartacus and slavery ! Cicero had noticed with alarm, and endeavored to remedy, the defect of population—" *Italiæ solitudinem*"—as early as A. D. 60, (*Cic. ad Alt. I, Ep. xix;*) but this was subsequent to the proscriptions of Sylla, &c.

decree, enacting that one-third of those employed in pasturage should be adult freemen, had been principally designed to produce an independent class of free laborers, and to repress the advances of slavery, he would neither have commenced nor contented himself with such an ineffectual measure. It seems rather to have been part of the general policy pursued by the Julian laws in favor of marriage and the purification of the annonarian lists, and to have been designed to diminish the pressure of taxation and increase the military strength of the State by multiplying the free population.*

But from its first devastation Italy did recover, notwithstanding slavery and the vast estates of the wealthy. Hume's essay on the populousness of ancient nations is one of the most sensible and satisfactory dissertations which have been written on the social condition of antiquity. In this he observes, "Were I to assign a period when I imagined this part of the world might probably contain more inhabitants than at present, I should pitch upon the age of Trajan and the Antonines; the great extent of the Roman empire being then civilized and cultivated, settled almost in a profound peace, both foreign and domestic, and living under the same regular police and government."† This is amply confirmed by the authorities cited in Hume's note;‡ and by the fact that nearly all the great remains of Roman architecture throughout the distant provinces belong to this age. Niebuhr does not give an equally favorable account of the increase of the population at this time, attributing its failure to increase to the ravages of the plague, but not to slavery.§ In this chapter, however, either from his own haste, or the carelessness of his reporters, Niebuhr is frequently at variance with his authorities. The age of the Plinies and Tacitus was not an age of Italian depopulation.

It was not in consequence of the servile wars that Italy was divided into large estates. Such a distribution of the

* Vide Dion Cass., lib. xxxviii, c. i, c. vii.

† Essays, Moral, Political, and Literary, Part ii, Ess. xi. Hume's Philosophical Works, vol. iii, pp. 487-8. Boston.

‡ Ælius Aristides, and Tertullian De Anima, c. xxx. The latter says: "Certe quidem ipse orbis in promptu est, cultior de die, et instructior pristino. Omnia jam pervia, omnia nota, omnia negotiosa. Solitudines famosas retro fundi amenissimi oblitteraverunt, silvas arva domuerunt, feras pecora fugaverunt, arenae seruntur, saxa pangunter, paludes eliguantur, tante urbes, quante non esse quondam. Jam nec insulæ horrent, nec scopuli terrent; ubique domus, ubique populus, ubique respublica, ubique vita. Summum testimonium frequentiæ humanae, onerosi sumus mundo, vix nobis elementa sufficiunt."

§ Lect. on History of Rome, Ed. L. Schmitz, Lect. lxxi, vol. ii, p. 288, London, 1844.

soil must have prevailed before such large bodies of renegades as fought under Eunus and Spartacus could have been collected, or could have operated with any success. Insurgent slaves are only formidable in the midst of a sparse free population. Moreover, the grievances proposed to be relieved by the Agrarian laws, and the dissatisfactions which led to the Agrarian rogations, were of earlier date. Pliny's remark is perfectly true, "latifundia perdidere Italiam;" but the commencement, continuance, and extension, of these latifundia, or immense estates, like the Duke of Sutherland's or the Duke of Athol's, may be attributed to greed, luxury, fraud, peculation, plunder, extortion, and oppression, but not to slavery. The remark of Pliny, and all the consequences that may be drawn from it, are still applicable to modern Italy, though the brilliant period of the prosperity of the Italian republics has intervened, and slavery has long ceased to exist. What Pliny remarked in antiquity Niebuhr himself discerned in the condition of the Roman Campagna.*

A glance at the map will be more effectual than antiquarian research in explaining why southern Italy was used principally as a pasturage. With the exception of the rich plain of Campania, and a small part of Apulia, this whole region was a rugged and mountainous country. The sheep and horses were wintered in the Apulian plains and the rolling lands of Calabria, where the spurs of the Apennines sink down into trifling undulations; and in summer, when the streams of the low land were dried up, they were driven to pasture in the mountains of Samnium and the Abruzzi. A tax was paid for the use of these rugged pastures, which appear to have been retained in the possession of the state. It will be sufficient proof of the character of the countries, said to have been divided into large pasture farms in consequence of the servile wars, to refer to the articles, "Apulia," "Bruttii," "Calabria," in the valuable Dictionary of Ancient Geography recently edited by Dr. Smith. We may add the testimony of Cassiodorus, a native of the extreme southern district of Italy, to the fact that Lucania had always been a cattle country, and the Bruttii a hog range, but that the vine culture had been subsequently introduced with success.† We may mention, too, that this section of Italy does not

* Niebuhr's Life and Letters, Lett. ccli, cclii, pp. 377-8. Am. Ed. of Mill. Pol. Econ. Introd., vol. 1, p. 25, 1st Engl. Ed., though he introduces in part the explanation of slave cultivation.

† "Huic enim fuit ut montuosa Lucania sues penderet; huic ut Bruttii pecus indigena ubertate præstaret. Fuit nimurum utrumque mirabile; ut et provinciæ tanta civitati sufficeret, et sic ampla civitas earum beneficiis victualium indigenitatem non haberet." xi. Var. xxxix.

appear to have been divided into large estates soon after the servile wars, but to have remained undistributed public domain; and that the ancient use of it as pasture, ascribed to slavery, still continues in the modern kingdom of the Two Sicilies, though slavery is extinct. The professor and his friends are unfortunately mistaken, even in the most trivial incidents of their statements.

So far from the destruction of human life in the war with Spartacus having occasioned the conversion of southern Italy into a great pasture ground, it was employed in this way about 112 years before that war, and fifty years before the devastations of any of the great servile wars. To this point we have the direct testimony of Livy, given in connexion with the mention of an insurrection of the slaves in Apulia, which broke out A. C. 185.* Moreover, the materials of a servile war would not have existed unless slaves had been already numerous; slaves could scarcely have been numerous out of the large cities except in a country farmed on a large scale; and these large farms must have been in process of formation before slavery became very extensive. The vast agricultural operations of southern Italy must, therefore, have preceded the servile wars; and their extension must have proceeded at least contemporaneously with, and not subsequently to, the increase of slavery. Thus the logic and the learning—the philosophy and the history—adduced by the professor and his compeers, are equally at fault.

We have deferred as long as possible the consideration of the decline of agriculture in Italy, because it was necessarily connected with, and consequential on, the decay of the population. But we are now prepared to show, in the teeth of reiterated asseverations to the contrary, that agriculture was not destroyed by slavery, and that it was not slavery which “impoverished the land, so that Rome was dependent on the granaries of Africa for bread.”

If slavery were absolutely fatal to agriculture, it would be perfectly incomprehensible how the two great slaveholding states of antiquity, Carthage and Rome, should have carried agriculture to such a high degree of refinement that the modern cultivation of the soil, even in England, has scarcely yet obtained to the excellence of the ancient; and that many of the most recent agricultural improvements should have been practised by the Carthaginians and Romans; and described by Palladius and Columella, and probably by Mago,

* “Magnus motus servilis eo anno in Apulia fuit. Tarentum provinciam L. Postumius, pretor, habebat. Is de pastorum conjuratione, qui vias latrocinus pascuaque publica infesta habuerunt; questiorem severe exercuit.”—LIV. lib. xxxix, c. xxix, §§ 8, 9.

from whose great work, translated from the Punic into the Latin under a commission from the Roman senate, the *Scrip-tores Rei Rusticæ*, or chief agricultural authors of Rome, principally derived their prescriptions. This is admitted and proved by the English writers themselves—and especially in a very interesting notice of Stephens' Book of the Farm, published a few years ago in one of the magazines or reviews. We have not the article before us, but believe that it appeared in *Blackwood*. How is it, also, that the agriculture of the southern part of the Union is so much more productive, efficient, and progressive, than that of the northern States, where so much more of the appliances of wealth, and of the means for the amelioration of the soil, are available?

This is a stumbling-block, which must be stumbled over—it cannot be removed. Let it be noted, too, that the period of the highest development of ancient Italian agriculture was subsequent to the Punic wars, and the destruction of Carthage—therefore, posterior to the multiplication of slave labor—and even posterior to the servile wars, which are alleged to have destroyed the culture of the soil. And it may be pointedly asked, at what era anterior to the establishment or extension of large estates and slave cultivation, the agriculture of Italy was equal to its condition in the days of Cicero, Augustus, Trajan, or even Theodoric, the Goth.

We do not deny the injurious effects of the *latifundia*, but slavery was merely the instrument, and not the cause, of the mischief. Nor was it by any means an indispensable instrument of the evil thus produced—for the same process of land appropriation, and the same prospect of ulterior calamity, are advancing in England without the presence of slavery. The system was ruinous. It was a desperate condition of society when six families owned the half of Africa,* and when even satire could represent the boastful *Trimalchio* as saying that one of his farms extended from *Terracina* to *Otranto*, but that he proposed to annex *Sicily* to it, that he might sail through his own domains on his visits to Africa.†

* "Verumque fatentius latifundia perdidere Italiam: jam vero et provincias. Sex domi semessem Africæ possidebant cum interfecit eos Nero princeps."—*Plin. Hist. Nat.* xviii, c. vii, v. *Sismondi Etudes sur l'Econ. Pol.*

† "Dicitur confine esse Taracinensibus et Tarentinibus; nunc conjungere agellis Siciliam volo, ut cum Africam libuerit ire, per meos fines navigem."—*Petron. Satyr.*, c. xlvi. The irony is very delicate and keen; but the moralist, *Seneca*, writes: "Quousque fines possessorum propagabilis? Ager uni domiro, qui populum cepit, angustus est. Quousque avatrones vestras porrigitur, ne provinciarum quidem spatio contenti circumscribero prediorum modum? Inlustrium fluminum per privatum decurrus est; et amnes magni magnasum quo gentium termini usque ad ostium a fonte vestri sunt. Hoc quoque parum est, nisi latifundus vestris maria ciuistis, nisi trans Hadriam et Ionium. *Æquanque* vester vilicus regnat,

On the same wealthy gentleman's farm at Cumæ, we are informed, that thirty girls and forty boys, slaves, of course, were born on the 26th of July. This does not look much like the depopulating effects of slavery; but no determinate inference can be drawn from the exaggerations of a caricature. On the same 26th of July, and on the same farm, 125,000 bushels of wheat were housed, and 500 oxen broken to the yoke.* Imperial tyranny, however, destroyed these wealthy landowners, and first confiscated, and then dissipated, their estates;† but fraud, rapacity, and chicanery, again monopolized the soil, until Ammianus Marcellinus could speak of private domains stretching across the world, and on which the sun never set.‡ The same tendencies are manifested in Great Britain, which, with Ireland, is divided between some 30,000 proprietors, some of whom measure their estates by the score of miles, and possess whole counties. But the agricultural distress of France is perhaps still greater. In 1847, there were nearly five and a half millions of landowners,§ burdened with mortgages on their real estate to the amount, in 1849, of \$2,500,000,000, and paying annually \$250,000,000 in interests and taxes, retaining only \$150,000,000 for the expenses of cultivation, and the subsistence of the landed interest.|| Slavery is not, therefore, the cause of the monopoly of land, as this is not any peculiar characteristic of slave States; nor is land monopoly the sole cause of agricultural decay, as the same result may be generated by the extreme division of property. The argument of the censors of Roman slavery breaks down hopelessly at every step.

What then occasioned the decline of agriculture, not in Italy alone, but throughout the Roman empire? We answer, the foreign conquests of Rome; the bribery of the people by the magistrates, who sought office or advancement for the sake of extortion, and impunity for their lawless gains; the gratuitous distribution of provisions, which drew the population to Rome and maintained them in idleness—a practice after-

nisi nisulæ, ducum domicilia magnorum, inter vilissima verum numerantur. Quam vultis, late possidete. Sit fundus, quod aliquando imperium vocabatur."—Ep. lxxxix, § 20. For his own part, Seneca preferred usury to lands.

* Petron. Satyricon, c. liii.

† Tac. Ann., lib. iii, c. lii.

‡ "Alii, nullo querente, vultus severitate adsimulata, patrimonia sua in mimensum extollunt, cultorum ut puta feracium multiplicantes annuos fructus, quæ a primo ad ultimum solem se abunde jactitant possidere."—xvi, vi, § 10; c. xxvii, xi, § 1; xxix, § 25.

§ Mills' Political Economy, vol. i, p. 576. Appendix. 1st Engl. ed.

|| London Times. We have not preserved the date of the paper.

wards extended to the other great cities; the fiscal exactions and the fiscal abuses; the increasing power and the increasing greed of capitalists and adventurers; the oppression and merciless treachery with which the poor, the peaceable, the honest were everywhere treated; and the systematic plunder of the weak by rich neighbors and unprincipled officials. To establish all these points satisfactorily would require the history of the Decline of the Roman Empire to be re-written with a research, fidelity, and minuteness which are not to be found even in Gibbon, and which are not promised nor suspected by M. Merivale. We can only prove the main point, that the decay of agriculture was not due to slavery, and show the original cause to which it was due.

We suppose that the authority and formal declaration of Augustus will be sufficient for this purpose, especially when they only confirm what might have been anticipated from the statements of Cicero, Livy, and Tacitus. Suetonius apprises us that Augustus had recorded in his memoirs of his own times that, "at a period when provisions were abundant, he had designed, and begun to attempt the complete and perpetual distribution of grain to the Roman people because the reliance on these gratuitous supplies had produced the abandonment of agriculture. He did not prosecute his design, because he was convinced that the distribution of provisions would be re-established by the ambition and bribery of those who might come after him. Accordingly, he afterwards prosecuted his policy with such moderation as to show no less consideration for the land-owners and traders than for the mass of the people."* This evidence is ample and direct; the authority is the very highest that the nature of the case admits, or that could be required. But the decline of cultivation was not occasioned at this time by either land monopoly or slavery, for much of Italy was without owners, and unoccupied even by slaves. This is manifest from the advice to Augustus which Dion Cassius puts in the mouth of Mæcenas.† He recommends that monarch to sell the property which had accrued to the treasury, and which had been swelled by the confiscations of the civil wars, and to lend the proceeds on moderate interest to enterprising persons who would themselves engage in agricultural operations, for the purpose of extending cultivation and improving the waste and public lands. It was principally intended as a financial measure to sustain the revenue, as is obvious from the text of Dion Cassius. The advice has been taken by the English

* Sueton. *Vit. octav.*, c. xlvi.

† Dion Cass., lib. lli, c. xxviii.

government, though chiefly for the benefit of land-owners, capitalists, and speculators. The Irish waste lands improvement bill in form, if not altogether in spirit, accords with the recommendation of *Mæcenas*. His suggestion is also incorporated in the French Société du Crédit Foncier de France, and is repeated in an exaggerated type by M. Dove, in the remedial policy which he proposes for Great Britain.* Whatever efforts may have been made by Augustus to rehabilitate Italian agriculture, they must have been frustrated by the tyranny and inordinate license of his immediate successors; and whatever ameliorations may have been introduced by the reigns of Trajan and the Antonines, they must have disappeared in the civil wars and under the tyrants of the succeeding century. To other causes of decay, moreover, must be added the persecution of the Christians, the most moral and industrious citizens of the empire.

Pertinax resumed the policy suggested to Augustus. He found Italy, not in the hands of large proprietors, who had been industriously assassinated by Commodus, nor occupied by slaves to the exclusion of free laborers, but desolate, and much of it escheated to the state. He offered a free grant of public lands, and exemption from taxation for ten years, to those who would reclaim and cultivate the abandoned soil.† But Pertinax reigned only eighty-seven days, and his laws were abrogated. Aurelian endeavored to settle and again reduce to cultivation the neglected lands in the rich plains of Lombardy.‡ What was wanting was men to cultivate them, whether they were bond or whether they were free; though the free, and not slaves, were preferred, because the former were tax-payers. From this time onward the legislation was continually directed to the increase of agriculture; and, by way of encouragement, the Christian Constantine exempted farmers from the general prohibition of Sunday work.§ For three hundred years any one might obtain land for nothing, who would or could cultivate it; but owners deserted their lands, turned bandits, concealed themselves in the woods, or took refuge with the barbarians, to escape taxation and other exactions, public and private.|| It was not slavery, but the

* Elements of Political Science.

† Herodian, lib. ii, c. iv, §§ 12, 33.

‡ Vopisci, Vit. Aureliani, c. xlvi. This, too, was a fiscal measure. The great effort of the emperors, the insoluble problem of the times, was to keep up the taxes, and the ability of the people to pay them.

§ Cod. iii, xii, 2, (3) A. D. 321. The privilege was withdrawn by a novel of the Emperor Leo.

|| Salvian de Gubernat. Dei. lib. iv, c. viii, p. 104. Ed. Baluzer. Cod. Justin, xi, xlvi. (xlvi.) Fr. Baldunius, in Legg. De Re Rustica, Schol. pp 1239-41. The illustrious Hallam, to the contrary, notwithstanding!

vices of individuals and of the state, fraud and fiscal extortion, civil wars and barbarian inroads, which destroyed the agriculture of the ancient world. The moment any thing like an orderly and merciful government was restored, capable of repressing the iniquitous practices of the treasury officers, and the cruel enormities of the rich and the powerful, and competent to resist at once foreign aggression and internal discord, agriculture revived without the abolition of slavery; and under Theodoric, the Goth, the Pontine marshes were drained by private enterprise,* and Italy exported grain.†

During the whole period of the decline of ancient civilization, slavery was so far from extending free labor, which did not exist to any extent, that the inclination of the slave-owners was to emancipate their slaves, for the sake of being relieved of the expense of their maintenance, and of being benefitted by their freedom. Laws were passed by Augustus to restrict the tendency to emancipation;‡ these were re-enacted and extended by later emperors;§ but so strong was the desire of the wealthy to disburden themselves of the support of their slaves, that it was during this very period, and by the operation of individual interest, that slavery was almost universally transmuted into predial servitude. Serfdom was a Roman and not a Teutonic institution.||

The management of their slaves by the ancients was calculated neither to prevent free labor, nor to multiply slaves. They were not merely discouraged from marrying, but their natural increase was prevented with a systematic precision and success which might have delighted Malthus, and was only imperfectly imitated in the Spanish West Indies. This was amply proved by Hume,¶ but has been forgotten by more recent writers, with the rest of his sagacious political discoveries. Hume, too, may substantiate the last of our nega-

* The contemporary inscription commemorating this success is preserved. Nicolaj, *Delle terre Pontine*.

† Cassiod. Var. iv, v. Sartorius, *Sur les Gouvernement des Goths*, c. x, p. 173. Sartorius says, p. 170: "les contemporains de Théodoric rapportent des faits incontestables qui prouvent que, de leur temps, l'agriculture prosperait en Italie." He denies, p. 167, the applicability to Italy, after the usurpation of Odoacer, of the maxim, *latifundia perdidere Italiam*—and attributes, p. 170, its desolation to the want of laborers of any sort.

‡ Sueton. Vit. Octav. c. xl. Montesquieu, *De la Grand. and De'cad. des Romains*, ch. xiii.

§ Chastel, *Sur l'Influence de la Charité*, 80, liv. i, chap. iii, pp. 117, 118.

¶ This may appear a bold assertion, but it is justified by Dig. xxx, i, § 112. Cod. Just. iii, xxxviii, § 11, xi, xlvi, (xlvi,) §§ 2, 7, 11, 13, viii, xvi, (vii,) § 7, par. 8. (Re-enacted by Frederick Barbarossa). Legg. Rusticæ, i, § 17, et Fr. Balduinus, ad loc. Salvian, *De Gubernat. Dei lib. iv*, c. viii, p. 106. Procop. De Bell. Vandal. lib. i, c. v, vol. i, p. 333-4.

|| Populousness of Ancient Nations. Phil. Works, vol. iii, p. 419, 430.

tions of the professor's statements, that slavery rendered Rome dependent upon Africa for bread.

"When the Roman authors complain that Italy, which formerly exported corn, became dependent on all the provinces for its daily bread, they never ascribe this alteration to the increase of its inhabitants, but to the neglect of tillage and agriculture; a natural effect of that pernicious practice of importing corn in order to distribute it gratis among the Roman citizens, and a very bad means of multiplying the inhabitants of any country."* This, with the evidence incidentally supplied by our previous remarks, seems to corroborate sufficiently the last of our traverses; but we may ask whether it is slavery, or free labor and free competition, which prevents Great Britain from raising her own grain, and compels her to import large supplies of breadstuffs from slave-holding Turkey, Russia, and the southern States of the Union? We would ask, too, whether it is slavery which has reduced the Irish to a diet of buttermilk and potatoes, or converted the Highlands of Scotland, first into sheep-walks, and now into game-preserves? Despite of the presence of slavery, ancient Greece seems to have supported a denser population than any part of Europe has since been able to do, with all the advantages of freedom.

We believe that we have sustained all our assertions. It has taken us much longer than we anticipated, and has required more research and minute investigation than we had foreseen; but we intended to perform our task effectually, though with brevity, and without entering into details that might be avoided. Error, however, grows and multiplies in proportion to the care with which it is examined, and the positions which we have been engaged in refuting express or imply almost as many fallacies as they employ words for their utterance.

There is only one more point which we have undertaken to notice. This is exhibited in the current formula: "It was this system of slavery that, more than any one other cause, hastened the downfall of the Roman empire." After all that has been already advanced it is unnecessary to disprove this assertion, although it is bolstered up with the very respectable name of Guizot. It might have claimed the equally respectable countenance of Robertson, and the not very respectable testimony of Milman. This is not the interpretation which Tacitus, and Salvian, and Zosmius give of the ruin of the empire; nor is it the interpretation given by the facts.

* Populousness of Ancient Nations. Hume's Phil. Works, vol. iii, p. 487.

But we will not plunge again into the mists of antiquity, but simply inquire whether it is in consequence of the corrupting influences of slavery in western Europe that France has reached such a state of wretchedness that M. Blanqui reports to the French Academy its incurability during the present generation,* and that M. Chevalier describes it as a yawning abyss, opened by hate, and threatening to engulf all classes and all parties.† Is it slavery which has bequeathed to "Merrie England," or impressed upon her lovely face these beautiful traits: "The demoralization of the population is England's greatest danger; and if not met in time by means of moral and intellectual training it may produce the direst evils and make England a manufacturing hell."‡ "The whole system of modern manufacture, with its factory slavery; its gaunt and sallow faces; its half-clad hunger; its female degradation; its abortions and ricketty children; its dens of pestilence and abominations; its ignorance, brutality, and drunkenness; its vice in all the hideous forms of infidelity, hopeless poverty, and mad despair—these, and, if it were possible, worse than these, are the sure fruits of making man the workman of mammon, instead of making wealth the servant of humanity for the relief of man's estate."§ This portrait of British society is drawn by a Scotchman—the distinguished secretary of the Scottish Association for the Rights of Scotland—no slaveholder, but an abolitionist. Is it slavery which has rendered the conjoined arms of England and France impotent against the fortresses of slave-holding Russia, who has defended herself successfully for two years with arms in the hands of serfs, directed by the nefarious owners of human flesh and abominable slave masters? If slavery was the grievous and fatal curse of the Roman empire, civilized Europe has in modern times discovered a curse equally effectual, and productive of the same results, after the abandonment of slavery. There is certainly a screw loose in the logic somewhere, as well as something rotten in the state of Denmark. M. Dove has, perhaps, discovered the true secret of both ancient and modern decline, when he refers the movement of the machinery of destruction to the "making man the workman of mammon, instead of making wealth the servant of humanity for the relief of man's estate." We

* *Journal des Economistes*, No. 95, 15 Mars, 1849, p. 411. *Rapport à l'Académie, &c.*, 3 Mars.

† *Journal des Economistes*, *ibid.*, p. 350.

‡ *The Theory of Human Progression*. By P. E. Dove, ch. I, sect. ii, p. 67. Note.

§ *Theory of Hum. Progr.*, ch. II, sect. ii, p. 241.

cannot compliment him on the remedial measures propounded by him, for he seeks his *materia medica* in the poisons which have prostrated the patient.

We have nothing at this time to say in favor of ancient slavery, neither have we anything to say against it, although fully conscious of its gross enormities, barbarities, and excesses, as we are also aware that there is ample room, at a suitable time, for the mitigation, amelioration, and regulation of African slavery. These points, however, in no manner enter within the scope of our proposed task. We have simply undertaken to challenge received dogmas, and to show that the effects attributed to ancient slavery were not produced by it, but by the operation of other and much more general influences. How far slavery may have co-operated to accelerate or retard, to augment or counteract, to alter or modify the evils with which it was accompanied, is an inquiry foreign to the contemplated discussion. Our enterprise was of a purely negative character; and we hope it has been executed in such a manner as to leave no doubts behind, and to prove at the same time that the suitable examination of the slavery question in any of its subdivisions cannot be conducted by blind adherence to any set of traditional opinions, but requires much more penetration, research, philosophy, and learning, than has been usually vouchsafed either by or to the assailants of the system.

The professor, whose words we have unceremoniously borrowed, has no reason to complain of the treatment of his arguments. He is only one sinner among many who have gone astray; he has only followed the multitude to do evil; he has been betrayed into an almost universal delusion, and can boast of illustrious colleagues in error. Epistemon, on his return from the infernal regions, reported that there was excellent cheer below, and that he had found the devils jolly companions, though the great men of the earth were discovered prosecuting strange avocations, and Alexander the Great was busily employed in earning a poor subsistence by patching old clothes.* The professor may make a similar report in relation to those who have long passed away from the scene, after having travelled the same beaten path which he has himself pursued. To us, the respectability of the heretics was the chief temptation to test the heresy. "One built up a wall, and lo, others daubed it with untempered mortar; say unto them which daub it with untempered mortar, that it shall fall; there shall be an overflowing shower, and ye,

O great hailstones, shall fall ; and a stormy wind shall rend it."

We have not been deterred by the portent of great names from attacking the wall ; because with the conviction of truth and right, of reason and evidence, of philosophy and history on our side, we were not afraid of the sounding brass and tinkling cymbals of great names or popular delusions. Jack Davis, or somebody else, according to Charles Lamb, was in the habit of saying that he would have fought the devil with such odds as Achilles had in his combat with Hector ; we believed that our odds were equally great in the present discussion, and we were, therefore, not alarmed by the name of Guizot, or by the hosts of others whom we knew to be at Guizot's back.

There is only one further duty to be performed. It seems advisable to present a brief summary of our conclusions. We believe that we have shown the history of slavery and labor to be still unwritten, and the acceptance of many unquestioned delusions on the subject. We have indicated our impression that slavery is not extinct, and is not likely to disappear from society ; and have given a few reasons for considering it a natural and spontaneous institution, but liable like the other natural relations to abuse. We have pointed out misapprehensions connected with the origin of slavery, but have also maintained that its character is not affected by the occasional improprieties of its origin. We have waived and refused any inferences from the propriety or impropriety of one type of slavery to the justice or inexpediency of another, and have confined our criticism to the estimation of the allegations employed in the condemnation of slavery among the ancients. Under various forms, and at every turn, we have exposed the absurdity and inconsistency of the polemics of abolitionists on this subject ; elucidating their awkwardness in the management of weapons which they cannot wield, and warning them of the dangers to which they are exposed in playing with sharp instruments, whose edge and point are turned towards themselves. We have maintained that labor was not rendered disreputable in antiquity by slavery ; and that there is little real difference between ancient and recent times in the respect shown to manual industry ; that it was not by slavery that the citizens of antiquity were degraded, and its states impoverished ; that it is a mistake to suppose that slavery produced depopulation, or displaced the free laborers ; that agriculture was destroyed by other influences ; that it was not the servile wars which ruined Italy, and created monopolies of land and extensive pasturages ; and that

other considerations and causes than slavery rendered Rome, (and the other large cities might have been mentioned in addition,) dependent on Africa, (and Italy,) for bread. We have also called attention to the fact that during the ages of Roman decline slavery was dying out; that the inclination of the times was to free labor, and that legislation was required to avert the dangers and miseries of selfish emancipation, but that, nevertheless, during this period, the tendency was so strong that it succeeded in converting, from interested motives, slavery into serfdom. We have examined every charge distinctly denounced against ancient slavery, of a political character, which was supported by the authentication of a respectable name, and which transcended questions of discipline, and every one we have found reason to consider unsubstantiated.

When Becker, and Blair, and Walton, and Edwards, and Guizot, are again accepted as authorities for an essay on Roman or ancient slavery, we hope that this supplementary chapter of doubts and difficulties may be deemed worthy of being employed as an appendix to their learned labors.

LAW AND LAWYERS.—BY THE EDITOR.

↳ No IV. (Concluded.)

CHARACTER OF THE LEGAL PROFESSION—THE CHANCELLORS AND JUDGES OF ENGLAND, ETC.

To the law, as well as to the other learned professions, belong the esoteric and exoteric principles; and, perhaps, to the law pre-eminently belongs that wide and extensive field, in which the former is capable of being applied. Legal subtlety is proverbial. We have assigned, in another place, some of the reasons for its existence; we simply mention the fact here. Every day the recondite, the profound, the hair-splitting discrimination, are named among the essential elements of the legal profession. The fact is so; these form the inner divisions of the temple—parts too sacred for rude and vulgar profanation—reached only by avenues too dark and cheerless to invite a numerous priesthood. The portals of the temple are thronged with devotees—they are crowded and clamorous without—but where are those that tread in solemn awe its vaulted aisles—that press behind the dark veil—that penetrate the deep recesses, and offer up sacrifice upon the altar?

Lawyers are accused of an exceeding fondness for refined distinction—of an elaboration in their perplexed metaphysics—of an ever ready hand to draw nice lines of demarkation, and spin out cobwebs of subtlety from their brains. And, in

very truth, it required no ordinary mental power to be successful here. What skill, acumen and rigid intellectual training, must needs be brought into such a field! Well did Alexander Hamilton suggest Euclid as the lawyer's indispensable companion, and peruse it annually himself. The whole learning of uses, trusts and powers, when in their full vigor—what a formidable array! Who shall march up with firmness and nerve? Who shall do battle here, storm the high places and bear away the laurel of victory even from the enemy's camp?

We have, in the case of Sir James Hale, a passage of exquisite perfection in the discriminating art. Sir James had committed suicide. "The felony," said Mr. Justice Brown, "is attributed to the act, which act is always done by a living man in his life-time. Sir James Hale was dead, and how came he to his death? It may be answered by drowning. And who drowned him? Sir James Hale. And when did he drown him? In his life-time. So that Sir James Hale being alive, caused Sir James Hale to die; and the act of the living man was the death of the dead man." Shakspeare, in Hamlet, is supposed to have had reference to this very case, and admirably ridicules its refinement: "If I drown myself wittingly, wisely observes one, it argues an act, and an act has three branches—it is, to act, to do and to perform. Argal, she drowned herself wittingly; here lies the water, good—here stands the man, good—if the man goes to this water and drowns himself, it is will he, nill he, he goes—mark you that; but if the water comes to him and drowns him, he drowns not himself."

Next to legal subtlety, its technicalities and its fictions have afforded ground for much humorous representation and no little satire. Law Latin has been yelept a barbarous and mongrel growth, and law French an abomination. Yet is it from these precious and prolific sources that all those rare exotics are culled, which thrive so well in the soil and atmosphere of a court-house. If we consider its English, how very significant and intelligible the phraseology at times—"tenancy in tail, without possibility of issue extinct," "the whole of an undivided moiety," "an undivided moiety of the whole," *et cetera*; sensible enough to ordinary and unintiated intelligence! With respect to fiction, never let it be thought for a moment that good old lady common law has anything of a romantic inclination, because it pleases her once in a way to draw upon the imagination; her ideality is curious enough, and when she sketches a John Doe or a Richard Roe, what queer old-fashioned gentry they prove to be.

But then she never sketches simply for amusement ; her purposes in this field are higher ; she aims to be just, even when she would be most fanciful—boasting her old maxim, “in fictione juris consistat æquitas.” How prolific was her imagination in her earlier creations of “fines,” “recoveries” and “ejectments ;” and with what gravity, even in her fooleries, has she been wont to appear, and what wisdom in her assumed gravity withal. When she talked in her “levied fines” and “suffered recoveries,” about suits, compromises and adjustments, that had never taken place, was she telling downright deliberate lies to defraud, so that Sir Matthew Hale’s conscientious progenitor might be excused for abandoning her retinue forever ? Not at all. She was squinting terribly another way ; her eye was fixed upon those overgrown and enormous estates, which the nobility, by virtue of the “family statute,” *de donis*, were locking up from the nation, and in this way encouraging every kind of treason, stratagem and spoils. By virtue of a statute of Henry VII, came the “fine,” but clerical ingenuity, that fecund soil, had long before given the idea of the “recovery,” of which the judges did not scruple to avail themselves, and the politic Edward VI to wink at, in all good nature.

Let us take a momentary glance at this so celebrated “recovery,” now buried in the “tomb of the Capulets.” Tom brings an action against Dick for land, alleging that he obtained it from one Harry, who had turned him (Tom) out of possession ; whereupon Dick enters court, ready to swear upon his “bible oath” that the land is his, obtained from one Bob, and as to the said Harry, that he has never known him or even heard of him before. “Bring in Bob,” says the court ; and in steps this worthy, who proves to be none other than the crier. At this Tom looks aghast, but begs to have a little private parlance with him, which is granted, of course ; whereupon they strut out of court, arm and arm. Directly comes in Tom alone, but Bob is never seen or heard of afterward. Horrible ! could Tom have murdered him ? Nothing of this kind is proved. What thinks the court ? Say the judges, it is evident that the land is Tom’s, and this Dick and this Bob have been conniving together to oust him of his right and title, for has it not happened, they shrewdly ask, that at the very moment when Dick is to establish his title Bob, fearing the detection of his iniquities, has taken to flight ? The proof is positive. Now, what is the whole amount of the admirable farce ? Simply this—to allow land, by virtue of a voluntary agreement, to pass from Dick to Tom, barring all claim which the heirs tail of Dick might

have in it ; or, in other words, to permit alienation indirectly, which directly was contrary to the feudal policy. With such iron fetters was the nation bound, and so artfully was the work of manumission accomplished.

“The law’s delay” has been everywhere the subject of song. To get into chancery is to live there, say some ; nay, it is often to take a fee simple right for the benefit of one’s posterity. Then are there, too, its prolix documents—its never ending repetitions—its “said John’s” and its “said William’s,” and its “deponents”—its quarto sheets loosely hieroglyphiced over and elegantly decorated with fancy tape. Save us from the “English bill” in chancery, with its “thrice told tale”—from all of these in mercy deliver us ! Who does not remember the great case of *Perrin versus Blake*, which for *thirty years* “awakened all that was noble and illustrious in talent and endowment through every precinct of Westminster Hall.”

Ten persons once applied to a lawyer to have articles of partnership drawn up, which, had it been legally accomplished, would have required by calculation 90,720,000 provisos ; enough, one would suppose, to strike terror into every aspirant for legal eminence, and justify the reply made by a celebrated judge to a lady, who inquired if her son had much chance of success in this branch : “Yes, madam, if he can eat sawdust without butter !”

The growth of law libraries presents an interesting topic for investigation and comment, since their present enormous stature and unmeasurable proportions cannot but inflict many a pang on even the most hardy and indomitable. Many times the space usually allotted to humanity would not suffice even to enter upon their merits ; and he would be a reckless, daring lawyer, who could encourage a reasonable hope of even turning over this cumbrous pile, much less of getting a glance at its contents. But this, however, is a modern bugbear,—one of the fruits of our steam-press reformation ! It was said sneeringly, at the commencement of the seventeenth century, that all the common law books in England might be carried in a wheelbarrow ; and Sir Edward Coke enumerates thirty-six volumes, which constituted, in his time, a complete law library, viz : the Year Books, Keelway, Plowden, Dyer, Coke, (his Reports,) Bracton, Fleta, Mirrour, Lyttleton, Perkins, Finch, Fitzherbert, Doctor and Student, West’s Symboleography, and Crompton. In Sir Matthew Hale’s time, we find the chief justice expending upon his library £1,500 a year ; still later, Mr. Hargrave’s sold for £8,000 sterling ; and, at the present day, the lawyer must

look out his million of law points, one can scarcely tell where. According to Chancellor Kent, the English Reports now make up 364 volumes, text books and digests 284 volumes, in all 648 volumes; besides the statute law, which Paley says is included in 50 volumes folio—to which add 200 volumes American Reports, Treatises, etc.! M. Camus, according to the same writer, drew up a select list for a lawyer's library, which contained 2,000 volumes, mostly ponderous folios, excluding entirely the English common and statute law! Truly do we live in an age of books, and what heavy draughts do their purchase make upon the profits of the profession. Not only are they formidable as to number but costliness, while, to make the matter as bad as can be, every few months produces a new edition. Apropos to the profits of the profession: we hear but seldom in our days of the princely fortunes realized and the enormous revenues. Sir Edward Coke enumerates two hundred noble families who had risen by the law, down to his time. Sir Samuel Romily's practice was £15,000 a year; Lord Keeper Dudley's £7,000; Lord Coke's £12 or 14,000; Sir Charles Wetherel received 7,000 guineas as a fee. We have often heard of medical quackery riding through the world in princely magnificence,* but no quackery or charlatanism could keep a man's life together at the law—nothing but the highest skill and the most profound learning can hope for this consummation.

Some observations on the literary character of lawyers would not be inappropriate in this place. The opinion is as old as the hills, that to become a great lawyer one must be content to be nothing else than a lawyer—must circumscribe his vision and draw in his scattering fancies within the narrow-drawn limits of Westminster Hall, making it his cradle and his grave—his ultima thule—the *ne plus ultra* of his struggles. Hence, we have a lawyer regretting that “the sober habit of mind induced by the studies of the office and the closet should ever be invaded and its energies let loose to wander through the tempting regions of general literature, taste, politics and metaphysics.” The common law has been said to be a jealous mistress, withholding all favor from the inconstant. It is, to be sure, a hard requisition, that one, for any amount of distinction, should be compelled “to eat sawdust without butter” all his life, when so many inviting feasts are set out on every hand before him; but they that tell us he must, say that “saw-dust,” etc., is not very bad after all, when one becomes used to it. If a great lawyer can only be manufactured in this way, it were far better, according to our

* S. Q. Rev., VIII, *Physic and Physicians.*

notions, not to be a great lawyer at all ; genius, humanity, everything noble in our nature, forbids the idea of being sepulchered in one profession, however vast. "It is a sad account," says Adam Smith, speaking of the division of labor, "that he who has been employed all his life making pin-heads must carry to the Almighty." But, is all this a fact? Are the pursuits of law and letters so incompatible as they have been represented? Let us turn again to the annals of the profession. Cicero was a lawyer, and yet he exhausted all the fields of literature and philosophy ; but alas ! he was no poet—what Boeotian clouds enshrouded him, when he would scale Parnassus ! "Had he written nothing else but this line," says Juvenal,* "he had been forever safe from the swords of Antony's followers :"

O fortunatam natam me consule Romam ;
or, as Dryden has felicitously translated—

Fortune fortuned the dying notes of Rome,
Till I, thy consul sole, consoled thy doom.

D'Aguesseau was a profound and elegant scholar. Somers was a classic of the highest character. Hale, a mathematician and theologian, and produced works upon both subjects. Lord Kames wrote the Elements of Criticism, a work destined to immortality. Sir William Jones was a poet and linguist, as we have already had occasion to show. More, Bacon, Selden, Mansfield, King, Eldon, Sugden, Lyndhurst, and Blackstone, did not disdain, at some period of their lives, to court the muse ; nor were they ever *mere* lawyers.

Where lawyers have been remarkably deficient in general knowledge, they have sometimes rendered themselves supremely ridiculous. Lord Kenyon's want of scholarship is well known ; he had a propensity for bad Latin, which his lordship would force in upon all occasions ; there was no end to his blunders. Having, at one time, enumerated several distinguished persons who had been advocates of Christianity, he concluded, "Above all, gentlemen, need I name to you the Emperor Julian, so celebrated for the exercise of every Christian virtue, that he was called Julian the Apostle." Mr. Chitty advises the lawyer to fill up his leisure hours with anatomy, physiology, pathology, surgery, chemistry, medical jurisprudence and police.

We have upon record for our improvement the plan of study pursued by many eminent lawyers—their hours of labour, amusement, etc. The Lord Guilford, for a considera-

* 10 Sat. 123, etc.

ble time, according to his brother, devoted himself sixteen hours a day to his books, repeating over and over the lesson, "keep your shop and your shop will keep you." Sir Matthew Hale studied sixteen hours; but Lord Mansfield thought the quantity of professional reading necessary much less than is supposed.

Every one will remember Coke's favorite verses :

Sex horas somno, totidem des legibus aequis
Quatuor orabis; des epulisque duas,
Quod superest ultro sacris largire Camenis.

Which Sir William Jones translates :

Six hours to sleep, to law's grave study six,
Four spend in prayer, the rest on nature fix.

Or rather, he says :

Six hours to law, to soothing slumber seven,
Ten to the world allot, and all to heaven.

The lord keeper Williams slept but three hours in the twenty-four. Roger North considered four hours a day sufficient quantum of study, which Sir Eardley Wilmot enlarged to six. A certain eminent lawyer remarked that he once thought well of a young man, until he heard that he studied sixteen hours a day, when he never could think well of him afterwards. In his hours of amusement Guilford would play upon the bass viol, whilst his friend, the Duke of Ludderdale, used to say that he would rather hear a cat mew than the best music in the world, and the better the music the more sick it made him. Something similar to this is said of Burke, Fox, Dr. Johnson, and Pitt. Justice Yates amused himself with reading Dean Swift; Camden, with the old romances, particularly the "Seven Champions of Christendom." Sir Edward Coke played at bowls.

How much better all of these than the "occasional inebriations" in which the earlier poets would indulge themselves:

Fetch me Ben Johnson's skull, and fill't with sack,
Rich as the same he drank, when the whole pack
Of jolly sisters pledged, and did agree
It was no sin to be as drunk as he.

But, after all, the recreations of D'Aguesseau and Brougham are to be preferred; the one relaxed himself with an interchange of studies, "*Le changement de l'étude est mon seul débasement*," in his own language—the other, after the fatigues of the chancery court, a cabinet council, and a debate in the house of lords, amuses himself by solving difficult problems, and speculating in the higher branches of physical science.

By the way, who would ever have dreamed of any relationship subsisting between law and poetry—yet such there is, and the evidences of it are not few. The Greek word *nómos* sig-

nifies a law or a poem—its explication being found in the fact, that in the earlier ages of Greece laws were thrown into verse, and sung by way of promulgation. Thus was it also with the laws of the Welsh and Britons.

Als free
Mak I thee
As heart may think
Or eigh may see :

was a form of legal manumission.

The following is a grant made by William I—

From me and from myne, to thee and to thyne,
While water runs and the sun doth shine ;
For lacke of Heys to the king againe,
I, William, King, the third of my reign,
Give to the Norman Hunter
To me that art both Line and Deare
The Hoppe and Hoptoune
And all the bounds both up and dounie,
Under the earth to Hell, above the earth to Heaven.
To witness that this is sooth
I bite the white wax with my tooth
Before Jugg, Marode and Margery,
And my third son Henry,
For one bow and broad arrow
When I come to hunt upon Yarrow.

The description of the Lawless Court is amusing, which met at cock-crowing, “when they whisper and have no candle, nor any pen and ink—but a coal.” Its title in the court rolls runs thus :

| | |
|----------------------------|--------------------------|
| Curia de Domino Rege, | Clamat clam pro rege |
| Dicta sine lege, | In curia sine lege, |
| Tenta est ibidem | Et nisi cito venerint |
| Per ejusdem consuetudinem, | Citius penituerint, |
| Aute ortus solis, | Et nisi clam accendant |
| Luceat nisi polus, | Curia non attendat, |
| Senescallus solus, | Qui venerit cum lumine |
| Nil scribit nisi colis, | Errat in regimine, |
| Toties voluerit, | Et dum sunt sine lumine, |
| Gallus ut cantaverit | Capiti sunt in crimine, |
| Per cuius soli sonitus, | Curia sine cura, |
| Curia est summonita : | Jurati de injuria. |

What could possibly be more amusing than to see Coke’s Reports done up nicely into verse : yet some wag has thrown them into that form. The State Trials have also assumed a similar dress. The following case is versified from Burroughs’ Reports :

A woman having a settlement
Married a man with none,
The question was—he being dead,
If that she had was gone ?

Quoth Sir John Pratt, her settlement
Suspended did remain,
Living the husband—but him dead,
It doth revive again.

Chorus of Puisne Judges—

Living the husband—but him dead,
It doth revive again.

This is equal to Lord Hardwicke's impromptu :

He that holdeth his lands in fee
Need neither to shake nor to shiver,
I humbly conceive—for look, do you see,
They are his and his heirs forever.

The remark has been made, in relation to the professions, that “physicians are the most learned, lawyers the most amusing, and then come the clergy.” We can very readily answer for the eccentricity, good humor, wit and life, which have characterized the bar ; and, if it be not beneath the dignity of our article, shall narrate a few of its anecdotes.

Sergeant Hill was altogether an odd fellow ; abstraction was his forte. Arguing a point on one occasion, he drew out a plated candlestick from his bag, and gravely presented it to the court ; some one having, it seemed, substituted a traveller’s bag in place of the sergeant’s. At another time he appeared at court with some derangement of his dress ; the counsel near him observing it, whilst he was conducting one of his most profound arguments, whispered, “your breeches are unbuttoned.” The learned sergeant, thinking it a hint connected with his cause, proceeded with all possible gravity, “my lords, the plaintiff’s breeches were unbuttoned.”

Lamb was complaining that the more he spoke in public the more diffident he grew ; as if it were strange, rejoined Erskine, that a lamb should grow sheepish. A strange humor possessed Erskine to witness fires, so that, according to Sheridan, a chimney could not smoke in the borough without his knowledge.

Mansfield was remarkably handsome. He was sitting to Sir Joshua Reynolds for a portrait, and being asked if he thought the likeness a good one, “Really, Sir Joshua, I cannot tell,” said the old lord, “I have not seen my face in a looking glass for thirty years ; my servant dresses me.”

But, perhaps, the happiest fellow for fun and frolic that the bar has ever produced was the celebrated Irish barrister, Curran. A volume might be occupied almost with his *bon mots* alone. He was ready for every occasion, and seemed to draw upon resources that were inexhaustible. “I can’t tell you, Curran,” observed an Irish nobleman, who had voted for the Union, “how frightful our old house of commons appears to me.” “Ah ! my lord,” replied the other, “it is only natural for murderers to be afraid of ghosts.” A deceased judge had a defect in one of his limbs, from which,

when he walked, one foot described almost a circle round the other. Mr. Curran being asked how his lordship still contrived to walk so fast, answered: "Don't you see that one leg goes before like a tipstaff, and clears the way for the other?" Cross-examining a horse-jockey's servant, Curran asked his master's age. "I never put my hand in his mouth to try," answered the witness. The laugh was against the counsel, till he retorted: "you did perfectly right, friend, for your master is said to be a *great bite*." A miniature painter, on his cross-examination by Mr. Curran, was made to confess that he had carried his improper freedoms with a particular lady so far as to attempt to put his arm round her waist. "Then sir," said the counsel, "I suppose you took that *waist* (*waste*) for a *common*."^{*}

When counsel, Mr. Curran would frequently be interrupted by the judge, Lord Avonmore, with expressions of fretfulness and impatience: "I see the drift of it all"—"you are giving yourself unnecessary trouble, Mr. Curran," etc., etc. On one of these occasions the counsel proceeded, "Perhaps, my lord, I am straying, but you must impute it to the extreme agitation of my mind. I have just witnessed so dreadful a circumstance, that my imagination has not yet recovered from the shock." His lordship was now all attention. "On my way to court, my lord, as I passed by one of the markets, I observed a butcher proceeding to slaughter a calf. Just as his hand was raised, a lovely child approached him unperceived, and terrible to relate—I still see the life blood gushing out—the poor child's bosom was under his hand, when he plunged his knife into—into—" "Into the bosom of the child," cried out the judge, with much emotion. "Into the neck of the calf, my lord; but your lordship sometimes anticipates."[†]

Over the feelings of this good old judge, Mr. Curran had a perfect command. They had been companions in early life, and members of a patriotic and convivial brotherhood, entitled "Monks of the Order of St. Patrick." Political rancor had suspended this intercourse for a while, but Curran was the advocate in a cause, and Avonmore the judge: here was a field for the honest-hearted advocate, and recollections of happier days crowded in to soften down and subdue all unkindliness. As he reverted to the past, his feelings were too much for him—his bosom heaved with emotion—all that was tender prevailed. The presence of the judge called up a thousand associations. "From the dearest and tenderest recollections of my life," Mr. Curran warmly continued—"from the re-

* Life of Curran, p. 404.

† Life of Curran, p. 85.

membrance of those Attic nights and those refections of the gods, which we have spent with those admired, and respected, and beloved companions, who have gone before us, and over whose ashes the most precious tears of Ireland have been shed. [Here Lord Avonmore could not refrain from bursting into tears.] Yes, my lord, I see you do not forget them. I see their sacred forms passing in sad review before your memory. I see your pained and softened fancy, recalling those happy meetings, where the innocent enjoyment of social mirth became expanded into the nobler warmth of social virtue, and the horizon of the board became enlarged into the horizon of man—where the swelling heart conceived and communicated the pure and generous purpose—where my slenderer and younger taper imbibed its borrowed light from the more matured and redundant fountain of yours. Yes, my lord, we can remember those nights without any other regret than that they can never more return—

“We spent them not in joys or lust or wine,
But search of deep philosophy,
Wit, eloquence and poesy,
Arts which I loved, for these, my friend, were thine.”—*Cowley*.

The moment the court rose, his lordship sent for Mr. Curran and threw himself into his arms.

Let us conclude this long, but, we hope, not altogether uninteresting article, with an observation or two on the religious character of lawyers. Seldom has the world allotted an over-much of piety to any of this profession. If the world be right, it is a fact to be accounted for ; perhaps there exists something in the atmosphere of courts unpropitious for the indulgence of religious feeling ; it may be, but then we know that nothing is commoner than the same accusation against other professions. Medical men, for instance, have been charged with inclinations favorable to irreligion and infidelity. Anatomy has arrayed itself against revelation. We shall not pause to explain. We point the modern lawyer, and we point the world, to the pious Hale—the pure Romily ! We would have infix'd upon the minds of all mankind, indelibly stamped there, the dying words of Selden : “I have my study full of books and papers on most subjects in the world, yet I can recollect no passage wherein I can rest my soul, save out of the holy scriptures,” and the most remarkable passage that lay upon his heart was from 2 Titus 11-14. The consolatory language of the great Erskine is worthy of all acceptation : “My belief in the Christian religion arises from the fullest and most continued reflections of my riper years and understanding. It forms at this moment the great consolation of a life, which, as a shadow, passes away ;

and without it, I should consider my long course of health and prosperity as the dust which the wind scatters, and rather as a snare than a blessing." Let the jurist be guided by these elevated truths—let him receive instructions from the Book which can never fail—let his path be illumined by

"this ray of sacred light—
This lamp from off the everlasting throne."

let him be pure in heart—be incorruptible in integrity—high in honor—giving "his days and nights, with a sincere and constant vigor, to the labors of the great masters of his own profession, and though he may now be but a humble worshipper at the entrance of the porch, he will entitle himself to the highest place in the ministrations at the altar, within the inner sanctuary of justice."

X H

THE AIMS AND OBJECTS OF STATISTICAL INVESTIGATIONS.

THE STATISTICAL CONGRESS AT BRUSSELS, SEPTEMBER 19, 1853, PREPARED FROM OTTO HUBNER'S JAHRBUCH, FOR 1855, AND AN ADDRESS OF MR. LEONE LEVI, BY LOUIS SCHADE, OF WASHINGTON, D. C.

The readiness evinced of late by all governments to co-operate in the promotion of science and of subjects of general utility is one of the most prominent features of the age in which we live. The affinity of interests which binds all nations of the earth is better understood and appreciated; the study of natural laws, in their relation to society, is more expanded and intelligent; the institutions of all countries are closely scrutinized, and rather than be wedded to antiquated systems, each is eager to profit by the experience of the other. Statistics are the safest guides for the appreciation of institutions. They are the records, not of theories, but of results. They reveal all that is defective; they are the instruments by which the truth or fallacy of principles is unanswerably tested; and by them comparisons may be instituted. But there can be no comparison without a common point and a common channel. This is wanting in statistics. They are collected in all countries, but without unity of purpose they reveal no phenomena, and illustrate no universal law; without uniformity in the forms and language of statistical documents they afford no basis for comparison. To supply this desideratum was the object of the Statistical Congress. It aimed at realizing a new era in this cosmopolitan science; it has for its object to facilitate the means by which nations may be beneficial to one another; to clear the path by which the laws of population, of production, of mind, and of morals may be better ascertained, and to diminish the barriers which

yet intercept the social, commercial, and scientific intercourse of nations.

As we have given already a sketch of the proceedings of this memorable congress at its first session, we confine ourselves to a résumé of the resolutions adopted:

I. *Statistical organizations.*—The congress, according to a programme issued by the Central Statistical Commission of Belgium, first considered the question of statistical organizations, with a view to the adoption of some uniform basis in all countries, both in the modes of collecting statistics, and in the official publication of statistical documents. It is greatly to be desired that henceforth the statistics of countries may be compared. To realize this, some general basis must be adopted; we must settle on the nomenclature of things; we must, so to say, adopt a universal language for the purpose, and simplify the tables which are to be the basis of comparison. The best instrumentality for the accomplishment of such an object is the creation, in each State, of a *central statistical commission*, or an analogous institution formed of the heads of the administration with the *addition of some individuals eminent in statistical science*, the central commission communicating with branch commissions in the provinces for all that is local or provincial. The central statistical commissions of all countries might be in constant communication among themselves, exchange their publications, and also transmit to each other the schedules used for the collection of information, so that they may be classified and organized. In order also to furnish the easiest means for the transmission of such documents, it was recommended to establish in each country a centre, or a person especially dedicated to send and receive all communications and publications of a statistical character. The statistical accounts were recommended to be made as accessible as possible, especially in the most useful parts, by publishing, at reduced prices, the summary tables with explanatory texts.

The importance of such arrangements is patent. Great difficulty is at present experienced in obtaining information from foreign governments, through the want of knowing what is actually published in other States, and through whose medium it may be ascertained. Equally important is the suggestion of publishing the summaries of statistical documents at moderate prices, as their bulk is a complete barrier, not only to the purchase of them, but also to their being easily handled and studied, the practical information they contain being often buried in the amount of particulars, chiefly of local interest.

II. Population.—The law of population is the most important subject of statistics. To ascertain the various causes which affect the state of population—to appreciate the true relation of all the social elements—and to show how each individual contributes his quota to the solution of the great human phenomena, are the labors of consummate philosophy and of deep mathematical science, able to grasp at great truths, fix their principles and deduce their consequences. The wider the sphere of observation the more solid will be the laws which it discovers. The recurrence of facts under different climates and in different states of society, and the modifications which certain laws assume as elements are changed or modified, are sources of careful study to the statistic who takes man as the centre of his observations. Yet this important study is now restricted to small divisions of the human family, owing to the want of uniformity and unity in the collecting of the census in different countries. In England, the United States, Sardinia, Norway, and the Netherlands, the census is collected decennially; in France every five years; in the German states triennially; in Belgium at variable periods. Besides, great variety exists in the items of information collected, and on the principles on which the censuses are based. The congress had the subject under careful consideration, and after considerable discussion it came to the following recommendations:

1. That the census of population should exhibit the number of individuals actually in the country at the date of enumeration; and, also, such particulars as may be required of those individuals who have legal domicile in the country, although absent from it.
2. The census to be taken not less frequently than every ten years, and in the month of December.
3. A special return for each family or household.
4. Special agents, or enumerators, to be employed.
5. The returns to state name and surname, age, place of birth, spoken language, religion, condition, whether single, married, or widowed, profession or occupation, residence, whether temporary or permanent, child receiving education, houses by stories, and number of rooms occupied by each family, gardens in connexion with the house, existing sickness, number of blind, deaf and dumb, absentees, and number of persons residing in public or private establishments.

In addition to the above there ought to be an annual registry of population, exhibiting the births by sex, by age of both parents, legitimate and illegitimate, number of twins, stillborn, deaths, marriages and divorces, by months. The deaths by sex, by age, and by months, distinguishing among dead children, till three years of age, the legitimate from the illegitimate. The deaths by months, with the causes of death, and the profession of the deceased; marriages, with the age of the parties, their condition, profession, and number of children, distinguishing the legitimate and those

acknowledged as such. Considering the extreme importance of a uniform nomenclature of diseases equally applicable to all countries, the attention of learned men is to be called to the question for further consideration at some future congress.

III. Territory. National Survey.—The question of population is immediately connected with that of territory, and with the national survey. In Great Britain the survey has hardly been commenced, though in Ireland it is complete. The congress adopted the following general recommendations: That it is desirable that each country shall be surveyed and mapped in a uniform manner. The statistical portion of the national survey should include the survey of the boundaries of the communes and their sectional divisions, the triangulations, the detail survey of roads, fields, &c., and the map of the whole country to be laid down on the ordinary scale of $\frac{1}{2500}$ (about 26 $\frac{2}{3}$ inches to one mile.) The following modifications to be adopted under certain circumstances: For forests and mountains the scale of $\frac{1}{5000}$, (nearly 13 inches to the mile;) for villages and crowded districts $\frac{1}{1250}$, (say 50 inches to the mile;) for maps of large towns intended for sewerage and sanitary purposes, the scale of $\frac{1}{500}$; general index maps to be on the scale either of $\frac{1}{10000}$ or $\frac{1}{20000}$, (that is about 6 inches and three inches respectively, to the mile,) for the purpose of bringing together under the eye a considerable surface of the country, when minute detail is not required. The reference or terrier exhibiting the names of the owners, the nature, cultivation, and area of each parcel. The valuation consists in recording the terms of leases and sales, as well as the prices current of produce for a period of fifteen years, in order to determine the value and rent of farms, and the average value of each kind of property. To fix by districts the types and value of each class of cultivation; to apply this classification to each parcel, and register the value in the reference book. The permanency of the survey, that is, the keeping it up to the actual state of things, being admitted as a principle, it is necessary to take means to do this so effectually as to avoid the very costly, if not very useful method of revision at distant periods. The means suggested for such a purpose are by noting in supplementary plans or maps the change of form or limits of each individual field; the change in the nature of the cultivation; the change of owners and the changes in the value of property, in exceptional case provided by law. The following rules for making the survey were recommended: That the triangulation be made according to a general map of the country, if there be one, and if not, that it be commenced by the great triangu-

lation, dividing and subdividing the triangles which it will produce into smaller triangles, to serve as the basis for the survey. That the valuation be undertaken immediately after the survey. That the valuation be made in such a manner that the same figures should represent, as nearly as possible, the same value in all the districts, and that the whole valuation should accurately represent the whole revenue of the real property of the country at the time the survey is made. That the survey may prove the fact of possession, and be accepted as evidence of title. No corrections to be made in the survey unless proved by authentic legal documents.

IV. Emigration.—Emigration has of late frustrated the natural course of the law of population, and produced a complete metamorphosis in the position of our working classes. The boundless wealth, closely connected with the blessings of free institutions, of the United States of America, and the wonderful discoveries of gold in California and Australia, have, in their turn, created such an avidity to emigrate, that the number of European emigrants, for some years past, has actually exceeded one million per year. Emigration is also the natural consequence of social disorganization, political convulsions, and religious excitement. Fanaticism and credulity send thousands to new and distant American settlements. Persecution drives, once more, Protestants and Jews out of Catholic countries, and *vice versa*, Catholics out of Protestant countries. These are the causes of important changes in the resources of countries, and they demand a deep and intelligent consideration; hence the statistics of emigration afford a wide field of instruction. It is, therefore, important that a systematic plan be adopted for the study of these social disturbances, and to this effect registers of emigration should be kept in each town.

The information required with regard to each emigrant is the name and surname, place and date of birth, sex, age, and condition; religion, profession, and approximate value of the resources or capital at his disposal; the day of departure; the name of the country where he goes to reside; the port of embarkation; the port of debarkation; the known or probable general causes of emigration. In the case of an entire family, composed of children and adults, under twenty-one years of age, with no personal property, it will be sufficient to state what amount of capital the father possessed for the maintenance of his family. The individuals who emigrate privately will be registered, with all the information which may be attained. By means of such

information, collected in all countries, general accounts will be made up annually, showing the causes of emigration, the number of workmen, and amount of capital they have taken with them from the mother country. A similar system may be carried out to verify the emigrations. Registries might be established at the ports of embarkation and debarkation, exhibiting first the ports of embarkation, the number of immigrants, men, women, and children; the country whence they come, the number, tonnage, and flag of the ships by which they came; the cost of the passage on an average for each destination. And for the ports of debarkation, the number of emigrants, men, women, and children; the country to which they belonged; the number, tonnage, and flag of the ship by which they came; the number of deaths during the voyage by sex, age, and profession, together with the causes of death; the number and sex of sick persons at their arrival; and the condition and probable resources of the emigrants.

V. *Agricultural Statistics.*—How far the yearly home produce yielded the necessary amount of food for the growing population of the European kingdoms, (and among them especially Great Britain,) has ever been a subject of anxious speculation, and the source of grievous losses. In the absence of any reliable account of the produce of the crops, the wildest statements circulate freely, and they find sufficient credence to affect the markets, the forerunners of misery and suffering among the masses. Year after year a cry is made for agricultural statistics, but in vain. The statistical congress bestowed on the subject of agricultural statistics that attention it demands, and had under consideration the time at which agricultural statistics ought to be taken; the periodicity of such statistics; the instrumentality to be used, and the information to be collected. As to the mode or instrumentality, the congress could only recommend to use agents faithful and intelligent, so that all the facts may be verified in the same place. What is the most convenient time for the collection of agricultural statistics cannot be laid down. Leaving it to the judgment of the different governments and statistical commissions, the congress could only suggest that the last quarter of the year would be preferable. Nevertheless, it may be objected that the statistics of cattle would be better to be taken in spring. As to the periodicity of such statistics, it should not be at greater intervals than ten years. It is also recommended to form two volumes, one giving the results of the year, and the other the average result of the period elapsed between that and the previous accounts. And

with respect to the items of information, they should comprise all the conditions, proceeds, and results of the agricultural industry of the country at a given time, and all the facts which may assist towards their proper appreciation in all their different aspects.

VI. *Industrial Statistics.*—Industry is a general term embracing all manner of pursuits. It comprises agriculture, mining, manufactures, commerce, and fisheries. Yet by a conventional application of the term, it is more properly used with respect to manufactures and mining. The statistical congress recommended the following principal subjects of information: The number of men, women, and children under sixteen years, employed in the factories, distinguishing the number of children engaged as apprentices, and the condition of apprenticeship; the wages, showing the number of workmen who receive average wages, and more or less than the average. It should be stated, also, whether the workmen receive board and lodging. The statistics of manufactures are divided into two great branches, viz: Textile industry, comprising manufactures of hemp, flax, wool, cotton, silks; and miscellaneous industry, including, for example, sugar refineries, ship-building, &c. For both branches the inquiries should relate to the number of establishments, the mechanical force employed, the number of workmen, and their wages. As to mining industry, the information to be collected should relate to combustibles, minerals, and metals, shewing the mines at work, their situation, depth, extent of the bed and qualities, the mechanical instruments used for extraction, number of workmen, average wages, and quantities extracted. The establishments to be classified according to the kind of metal produced or manufactured, such as iron, copper, lead, zinc, &c.; and specifying the principal instruments used for the work, such as furnaces, forges, foundries, &c.

VII. *Commercial Statistics.*—Of all statistics the statistics of commerce are subjected to the closest analysis. The merchant governs by them his daily operations; the economist draws from them the great lessons derived from the distribution and interchange of produce and manufactures. Public finances and foreign exchanges, banking and credit, are all affected by their great totals; and yet there is no branch of statistical operations necessarily more loose and less to be relied upon. Commercial statistics are classified under four heads: General commerce, special commerce, transit, and bonding. They are, moreover, divided into imports and exports by land, rivers, and canals, and imports and exports

by sea. The imports and exports by sea should also distinguish those by national and foreign vessels. The tables ought to specify the countries whence the merchandises are imported, or to which they are exported; the total quantities of weight, measure or number, following as much as possible a common type for the designation of these quantities, and the basis of valuation. The value and quantities ought to be given in units and decimal fractions. There ought to be two columns, one giving the official permanent value, and the other the variable or real value. The value of articles of import ought to be given exclusive of custom and excise duties. The tables should contain also the tariff, and the total amount of duties received. The accounts should always refer to a period of twelve months, and the general or summary tables show, as much as possible, the corresponding figures for anterior periods.

VIII. Navigation.—The statistics of navigation are divided into two great branches, sailing and steam vessels; for each of which the accounts should state the number and tonnage of vessels entered and cleared, without distinction of the countries whence they arrive or to which they are going; the number and tonnage of vessels entered and cleared with such indications; the number of vessels entered and cleared according to flag. In all these tables, the general results should exhibit the double distinction of national and foreign vessels, and the number of ships laden and in ballast; and as the basis of valuation for the tonnage is not the same in all countries, it should be stated upon what basis it has been made. The statistics of the mercantile marine should also exhibit the number, kind, and tonnage of vessels belonging to each country, of vessels constructed, and vessels naturalised during the year; the number of vessels lost, sold abroad, or broken up; the number of seamen enrolled each year, distinguishing national and foreign seamen. The congress recommended that in the statistical tables of countries not possessing the metrical system, a column should be added indicating the metrical reductions of weight and measures; and also that the government shall not limit their endeavors to the collecting statistics of foreign trade, but that they should collect every account which may be conducive to a correct estimate of the home trade. The Central Statistical Commission of Belgium was also recommended to prepare, before the meeting of the next congress, a report of all the statistical tables of commerce published in the different countries, showing their dissimilarities, both in their forms and their contents.

IX. Economical Budgets.—In order to appreciate the bearings of a subject of statistics so novel and important, some preliminary observations are necessary. The question itself originated in London, during the great exhibition of 1851, when a number of statisticians from different countries met together, and it was mainly due to the energy of the late honorary secretary of the London Statistical Society, the learned Mr. Fletcher, that the subject assumed a tangible form. The object of the inquiry is to arrive at a clearer knowledge of the resources of the working classes. It is not an attempt to prescribe or circumscribe the expenditure of individuals, making budgets of families as the budgets of provinces, but simply to organize into a system all those desultory inquiries which are constantly made into the state of the working classes. It is not to be expected that a question of such a character can by any means be reduced into a definite form, or into an absolute certainty; but any advance made into the discovery of the great *arcana* of the human family, the great question of the means of subsistence of the masses, will be of great public benefit. The question was introduced to the congress in a most eloquent address by M. Vischers, (Belgium,) which concluded with the following observations :

“Ainsi, Messieurs, en généralisant l'étude de cette question dans différents pays, on pourra approfondir tout ce qui concerne les classes laborieuses; mais en même temps on étudiera les effets des différences physiques du sol et du climat, ou de celles qui proviennent des institutions; quels sont les effets de la grande propriété ou du morcellement des terres, du développement de l'état industriel ou commercial, ou des occupations purement agricoles. Nous verrons si avec confiance et comme les yeux fermés on peut accepter la croyance, que les classes inférieures, abandonnées à elles-mêmes, peuvent toujours suffire à leur besoins.

“En repoussant une intervention exagérée de l'action sociale dans ce qui concerne les intérêts des individus, nous verrons si l'on n'a pas trop laissé jusqu'ici dans l'oubli les classes ouvrières, surtout celles qui peuvent souffrir. Tandis que certaines écoles ont montré peut-être une indifférence trop grande à l'égard de ces classes, d'autres ont produit des systèmes dangereux. Il nous faut rechercher la vérité. A ceux que leur cœur ne porterait pas à s'occuper de ces questions je répondrais par leur intérêt. Cet examen est nécessaire, peut-être même urgent.”—“Jam proximus ardet Ucalegon?”

The budgets of the working classes comprise three kinds of expenditure: 1st. Expenditure of a physical and material character; 2nd. Religious, moral, and intellectual; 3rd. Luxuries and vices. The first includes nourishment, such as bread, vegetables, meat, milk, butter, spices, tea, coffee, and beer; habitation, clothing, sleeping apartments, wood or coals, light, washing, means for the preservation of health, baths, repairs of houses, insurances, purchase of furniture, taxes, postages, expenses incident to their occupation or accruing from the keeping of a garden attached to the house. The second class includes church expenses, school for children,

apprenticeship, purchase of books, subscriptions for moral, charitable, and intellectual purposes, subscriptions to friendly societies, savings' banks. The third class includes expenses at the coffee houses and public houses, drinking, snuff, gambling, lotteries, ornaments of toilette, theatres, public festivals, loans, and pledges. With a view to compare the results of such information, it is suggested to prepare the budgets of three families, composed each of father, mother, and four children, of sixteen, twelve, six, and two years respectively, for each great division of the country, or for such portion as may be the object of the study, distinguishing agricultural laborers and other kinds of workmen. The budget will have reference to a family of poor laborers maintained partially at the public expense; a family of laborers not comfortably situated, yet not under public charity; and thirdly, a family of laborers comfortably off and quite independent. Such budgets should exhibit the incomes as well as expenditure. The incomes involve the wages of the head of the family, mother, and children, counting the average number of days they are at work, the number of holidays, and bad times in the year. The other sources of income will be those arising from a garden or parcel of land, rent of a house or of a field, produce of pasture, of a pig, a goat, &c., enjoyment of public property, pensions, funds, interests, miscellaneous produce, and eventual income.

As the central statistical commission of Belgium has drawn up a number of queries on the subject which have already been largely circulated throughout Belgium, it was recommended that other governments should institute similar inquiries on the plan suggested.

X. *Statistics of Indigence or Pauperism.*—The statistics of indigents, or those in a state of actual privation of the necessities of life, not of those comparatively poor, should be collected by departments in country places, by household or families, and by individuals, (men, women, and children below sixteen years,) distinguishing those who are accidentally or temporarily assisted and those who are assisted continually and permanently. It should also be ascertained, as much as possible, the number of persons receiving assistance from private institutions, either exclusively or together with public charities; and a periodical division should be made of the documents, registers, lists, &c., on which the poor are enrolled, distinguishing the ages and sexes. The principal and essential causes of poverty should be ascertained, such as old age, sickness, infirmities, widowhood, loss, or abandoned by parents, numerous family, want of work, insufficiency of

wages, or other involuntary causes ; or bad conduct, idleness, intemperance, dishonesty, or other voluntary causes. Information should be collected of the number and nature of charitable institutions of different kinds, exhibiting the number of poor persons whom they assist at a time, or the character, causes, and effects of pauperism, number of mendicants, vagabonds, and abandoned poor without any legal domicil ; valuation of the public charities and of the help afforded to the poor, distinguishing those that are assisted in their own houses and those assisted in the establishments, or in-door and out-door relief ; the number of provident institutions for the object of alleviating or preventing poverty.

XI. Educational Statistics.—Educational establishments are divided into four classes—1st. Those applied to elementary teaching, or infant schools, including Sunday schools, schools for the blind and deaf and dumb, charitable schools, orphan schools, &c. ; 2d. Middle schools, including atheneums, (academies,) lyceums, industrial and commercial schools, schools of agriculture, of navigation, &c. ; 3d. Superior schools, such as universities, schools of mines, engineering, &c. ; 4th. Those applied to special branches of education or science, such as religion, schools of design, gymnasium, military, &c.

The statistics of education should include, for each class, the number and nature of establishments, showing the subject of instruction, the method, the language in which teaching is conveyed, the religious character, &c. ; the number of masters, instructors, and professors ; the administration and inspection ; the accessory institutions intended to complete the courses of instruction, such as conferences, libraries, museums, examinations, &c. ; the income and expenditure, specifying the amount of fees from students ; the amount of State or of charitable endowment ; and the expenses of management, and inspection, and teachers. Other subjects of information are also recommended, such as may show how education and instruction are combined in the various stages ; the special provisions made for the education and instruction of children of the agricultural laborers, working classes in the cities, and the poorer classes, whose education and instruction is given gratuitously, and where it is obligatory on the part of the children to attend, what rewards are afforded or compulsory means used ; distinguish in establishments and schools of the first class the general attendance in summer and winter ; ascertain, as much as possible, the results of the various systems of education, and compare their value ; give the examinations, degrees, and diplomas generally granted ;

the state of education among young men in the military service and among prisoners, and also the number of signatures in marriages ; and, lastly, indicate such circumstances as may, favorably or unfavorably, affect such results.

XII. Criminal Statistics.—Criminal statistics embrace principally the number of offences and of commitments, the nature of crimes, the means used for their prosecution and repression, and the penalties inflicted. The congress recommended to establish, as the basis of criminal statistics, the nomenclature of all the offences which come under cognizance of the general code or special laws of any country rather than general classifications. To add to the statistical tables detailed explanations of the criminal legislation of the country, principally upon the meaning attached by the penal law to the qualifications, differences, and degrees of culpability. To invite the jurists, and, above all, the criminalists of different countries, to draw up, according to the penal law of their respective countries, a table, as detailed as possible, of the crimes, offences, &c., with explanations of their nature, with a view to form the basis and prepare the elements for a more general classification, applicable to all countries.

The statistics of crime should exhibit the number of offences under cognizance of the law; number of offences which, owing to any cause, have not been prosecuted, and the number of those which were prosecuted ; and of the persons committed, by sex and age, by years up to 21 years of age, and by ten years from 21 to 30 and upwards; number of persons discharged and condemned, with the same distinction, the penalties inflicted, by a nomenclature as minute as possible; number of capital punishments, detentions, transportations, fines, &c.; indicating especially the number of executions, the durations of the penalties, whether for perpetuity, for more than 10 years, 10 to 5, 5 to 3, 3 to 1 years, 1 year and under; that of transportations, and the amount of fines; number of individuals imprisoned for any cause whatever; duration of detentions; number of discharges with or without bail; duration of the trial; number of persons condemned, by sex and age, distinguishing those who have been submitted to another trial. To these general statements there should be added the origin, domicile, condition, profession, and extent of education of the criminal, the causes known or presumed of the crime, the attenuating circumstances; the trials by defaults, mode of procedure and judgment, indicating each phase of the trial, the appeals, and the exercise of grace and pardon.

XIII. Proceedings of Congress.—The statistical subjects

proposed for discussion being exhausted, the attention of the congress was directed to two important questions, eminently calculated to promote the social and commercial relations between different countries. The first was the adoption of a system of international postage; the second, the extension of international commercial law. The proposed national and international code of commercial law has lately received considerable impulse and a practical tendency. The congress passed a resolution expressing a hope, 1st, that the recent postal reforms of different countries would be introduced into the international postal relations; 2d, that the great differences now existing in the commercial legislation of different countries may be diminished and even removed altogether. Another important wish was expressed, that special and detailed statistics be obtained for all large cities. The Central Statistical Commission of Belgium were then intrusted to select a place and fix a time for the future meeting of the congress, making it known at least six months before the time. Lastly, on the motion of Lord Ebrington, a vote of thanks was passed by acclamation to the president, (Mr. Quetelet,) and after a delivery of a short address by the president the congress closed on Thursday, the 22d of September. Thus terminated these most important proceedings. The congress set four days; the sections sitting between 9 and 12, and the congress from 2 to 4 o'clock, each day. The Central Statistical Commission, the minister of the interior, M. Quetelet, and M. Duepetiaux, were sumptuous in their liberalities and hospitalities towards those who attended the congress. The king, the Duke de Brabant, with several officers, honored the congress with their presence, and invited a great number of the members to a banquet at the palace. The clubs and other public institutions were opened to the members, and a statistical dinner, attended by all the members of the congress, contributed to render the whole a most social and brilliant entertainment. Thus the interests of statistical science were extensively promoted, whilst the representatives of twenty-six States, and many scientific men from all countries, were united for the common object of establishing the basis upon which the true economy of nations may be founded.

XIV. The effect upon the United States.—The important proceedings of such a congress, upon such numerous and comprehensive subjects, cannot fail to awaken the deep interest of our country, and especially of our legislature, as its results impose on all governments and statistical societies responsible duties. To give effect to the wise suggestions of

the first Statistical Congress, (and, also, of the second, which opened the 10th of September, this year, in Paris, but of which the writer possesses no dates yet,) in so far, at least, as it is practicable, in this country, in what is now most essential. According to the different forms of government the instrumentalities employed must vary. We are, in this case, in no small embarrassment. Ranking, as regards commerce, agriculture, and the various exploits of civilized life, among the first nations of the globe, we must confess that in the important element of statistics we have not obtained that position to which we are entitled, and which, under all circumstances, we ought to occupy. We cannot complain of a scarcity of statistical writers, among which there are some well known even across the ocean, but we must complain of a certain nonchalance and indifference with which our Congress has regarded this matter till now. With exception of Switzerland, all European countries have official *permanent* statistical bureaux, under the superintendence of the most renowned statisticians of the country, and not under the unskilled management of political aspirants. *We have no such bureau*, and, therefore, all the above resolutions can only have a *partial* effect and benefit upon us, as the United States are not yet prepared to keep step, in this important branch, with other European countries. If the next Congress would direct its attention to the establishing of a new *permanent* statistical bureau, every statistician will hail with delight the progress secured by so successful an event.

COAL ON THE LOWER OHIO.

Every portion of the Mississippi valley is deeply interested in the development of the extensive coal mines in its centre. *There* is the power that will attract our rich metals and varied fibrous staples, and that will strengthen our independence and union, and enlarge our national wealth beyond our conceptions.

We copy the following article from the *Louisville Price Current*, and ask the attention of our commercial friends in the cities of the southwest to the facts it contains. If they would retain their present business, to say nothing of its enlargement, they must lessen the cost of river freights by lessening the cost of fuel for their steamboats.

The coal trade of the lower Ohio is beginning to assume no inconsiderable importance. The "Illinois coal basin," where it is cut by the Ohio river, is in the very heart of the American granary. Its coal is of every variety of the cannel and semi-bituminous species; is overlaid by sandstones of superior quality, and rests on refractory clays, said to be equal to those of Stonebridge, England. Iron ore, indefinite

in quantity and excellent in kind, is almost in *juxta-position*, while lead ore is not of unfrequent occurrence.

These coals are in strata that average, perhaps, four feet in thickness, and resting immediately on a thin bed of soft shale are easily mined. Generally, they are reached by "adit levels," and sometimes, as at Cannelton, are self-draining. The cost of mining and delivery at that point is stated to be three and a quarter cents per bushel, (or about eighty-five cents per ton,) the "royalty" is usually one cent, and the present price is six cents by wholesale, or to barges and flat-boats; seven cents delivered to steamers from "box boats." The Cannelton cotton mill is supplied at five cents a bushel, or \$1 40 per ton.

Below the falls of the Ohio, at Louisville, the first available section of the coal field is found back of Cloverport, Kentucky. This is the purest "jet" yet found in America, and perhaps, is superior to that worked in England. It is about eight miles from the Ohio; the stratum is from twelve to twenty-seven inches thick, and between layers of sand stone; cost of mining say \$1 25 per ton; price at the river bank \$5 per ton. The Breckenridge coal company have here a large tract of this coal, and are now prepared to furnish large quantities of it. Its cost and high price will preclude a home market to steamers; but its freedom from disintegration, its cleanliness and rapid combustion, fit it, in a remarkable degree, for shipment. It should command at least \$12 per ton in our eastern markets, and can be furnished at a cost of about \$10 per ton. For chamber and parlor use it is immeasurably superior to any other coal. A new and probably important market is opening for this coal as a material for making lubricating oil. This oil has been used in the Cannelton cotton mill, and proves equal to the best sperm oil. Its cost is estimated at less than fifty cents a gallon. A company is already erecting a large mill at Cloverport for the manufacture of this oil on a large scale. Twelve miles below Cloverport are the Cannelton and Hawesville mines, on opposite sides of the river. Here the "dip" of the strata is about fifty feet to the mile, and from the out-cross on the top of the bluffs to the water's level the available coal extends about five miles along the river. On the Cannelton side, the whole coal and most of the surface is owned by the American Cannel Coal Company, which was formed in 1836, by Seth Hunt, J. T. Hobart, and some other Bostonians. This company, after various reverses and the expenditure of a very large capital, has succeeded in laying the foundations of what may become one of the most important manufacturing cities

in the country. In six years Cannelton, from a small hamlet, has become a town of some 4,000 people. Its cotton mill of 11,000 spindles has no superior and few equals of its class, and shows earnings that must induce the erection of others at the same point. Its cost of manufacture (brown sheetings) is said to be less than the average cost in New England, while it is in close proximity to the cotton fields, and is in the centre of a great market; its pay rolls of the mill and mines now average from fifteen to twenty thousand dollars a month. This will be largely increased by the operations of a wealthy and influential company, who have recently leased a section of the mines. The present capacity of the mines here is about 11,000 bushels a day. The new company referred to will soon be able to double this quantity.

At Hawesville there are four coal companies who can deliver about 10,000 bushels a day. The coal on this side of the river is of the same quality as that at Cannelton; but, as its dip is from the river, the expense of drainage is something of an item now, and will be constantly increasing. From the healthiness of the position, and the settled character of the country, Hawesville, as well as Cannelton, may expect to be in an important manufacturing position. It will perhaps be seen that free soil will prove most attractive to a manufacturing population.

The next coal mine in order is one recently put in operation at Lewisport, fifteen miles below. The coal is found in the hills about two miles from the river. A first class railroad has been constructed, and the delivery of some 2,000 bushels a day can be made. There is some contrariety of opinion as to the character of this coal and the extent of its area.

Next comes the Bon Harbor mines, three miles below Owensboro, Kentucky. The coal stratum is five feet thick, but so sulphurous that it cannot readily be sold for steamboat use. It will, doubtless, be valuable at some future time for manufacturing purposes. In this neighborhood the soil is of remarkable fertility, and can easily support an immense manufacturing population. The coal alluded to is decidedly better, and can be delivered at a far less cost, than that of Staffordshire, England.

The Newburg mines, in Indiana, eight miles above Evansville, have been opened by the Messrs. Roberts, and by Messrs. Phelps & Chamberlin. Their present capacity is about 4,000 bushels a day. The coal stratum here is about four feet thick, and is found 80 feet below the high-water mark. Its character is fair, and it can be worked to con-

COAL ON THE LOWER OHIO.

siderable advantage, if free from "faults," and if fissures in the overlaying strata do not occur. Without faults, slips, or dykes the English mines could be worked. Each forms a limited water basin, and this is susceptible of drainage. The Illinois coal basin has probably over thirty distinct coal strata; what dislocations occur in these is yet to be ascertained. We have as yet scarcely noticed those on the outlines of the field and above the water level.

The Bodiam mine, at Evansville, has recently been opened by Messrs. Kersternare & Co. It shows a coal similar to and below the level of that of Newburg.

Between twenty and thirty miles back of Evansville, the canal cuts a thick bed of coal, from which that city will draw part of her supply of fuel.

At Henderson, Kentucky, several companies are engaged in developing, by shafts and borings, the coal strata below the water level. Among the results of these borings, it is shown that brine of considerable strength can be raised in this vicinity, and it is likely that the manufacture of salt will become an important branch of industry on the Ohio, between the Cannelton and Union mines. Several coal mines have been opened on the Green river, from 25 to 60 miles above its mouth, and in the immediate vicinity of rich deposits of iron ore. The coal and iron of this district are likely to be developed soon by the wealth and energy of Mr. Alexander, whose rich mines in Scotland may prove inferior to those in Kentucky.

The lower or western margin of the coal field is cut by the Ohio at the mouth of the Saline and Tradewater rivers. In this vicinity, the Curlew mines, on the Kentucky side, are the first in order. At these, large preparations have recently been made for future business. What their capacity is we are not advised. The next are the Mulford mines, that have been extensively and profitably worked for several years. The yield here has reached 10,000 bushels a day, and the price has been eight and nine cents per bushel. The Curlew and Mulford mines are connected with the Ohio by railroads from two to three miles in length. Below, and some four miles up the Tradewater, are the mines of Hon. John Bell. At these the coal stratum is probably identical with that at Cannelton and Hawesville. Messrs. S. L. Casey and others have commenced operations on and near the Tradewater, of the extent of which we are ignorant. The Tradewater district, filled as it is with coal, iron, and lead, will at some future day rival that of the Mersey and Ribble in manufacturing importance.

In Illinois, and nearly opposite to Mulford's, is the confluence of the Ohio with the Saline, a small and narrow stream which rises in Hamilton county, and is, during the winter floods, navigable for nearly thirty miles. The bluffs on the eastern side, which contain six or seven seams of worked coal, come within three miles of the Ohio, and about six miles from the mouth of the Saline. Here the Shawnee Coal Company have, during the last two years, opened galleries, sunk shafts, constructed two miles of railroad, put up saw mills, and laid the foundation of a city. The stockholders are chiefly citizens of New York, and have the ability of accomplishing large results. The basis and material of a great city are certainly there. Equivalent advantages at any point in Europe would have made, long ago, a city with a population larger than that of Manchester and Birmingham combined. How long it will take here to conquer the forests and malaria depends on the faith and perseverance of these non-resident owners. The coal is various in quality; that which has already been in market has certainly been inferior. The good coal is there, however; but present prices and facilities are, perhaps, too limited to bring it out; as the bar at the mouth of the Saline has proved a serious impediment to the delivery of coal on the Ohio, it will be necessary to construct a new railroad from the mines to some good river landing. The width of the Ohio, and the changing character of its channel, as well as the crumbling nature of its banks from Shawneetown to the highlands below the Saline and Tradewater, are serious obstacles to the convenient delivery of coal on either side of the river in this district, while there may be no site for a manufacturing city nearer the mine than Wallace's Ferry, about fifteen miles below.

The Union coal mines are the lowest on the river. The thickness of the coal stratum there is said not to exceed twenty-seven inches. This can be worked at a higher cost, (say, four cents per bushel,) and will pay even at this. The extent of the seam is uncertain. Its quality is good. These mines are in the highlands nearest the confluence of the Ohio and Cumberland.

The Illinois Central Railroad cuts the lower or southern out-cross of the Illinois coal field about seventy-five miles from Cairo, and great reliance has been made on coal freight by the engineers of that road. At a low cost of transit (say two cents a ton a mile, or \$1 50 for the seventy-five miles) the coal from this source, delivered on barges at Cairo, would cost at least nine or ten cents the bushel, while an equivalent

article can be furnished from the mines on the river at seven or eight cents per bushel.

The owners and lessees of the Lower Ohio coal mines have invested from one and a half to two millions of dollars in lands, fixtures, and rolling stock. They can now deliver about 50,000 bushels a day. Reckoning two hundred working days to the business season, this would yield a supply of only ten millions of bushels a year, or only one-third of the home consumption, and about one-fourth of the coal delivered in the vicinity of Pittsburg. The demand for coal between Louisville and the Balize is variously estimated. Some who profess to have examined the markets with care have stated it as high as thirty-five millions of bushels a year. They assume, however, that coal would be the exclusive fuel of steamboats, and in sugar mills, if it was supplied at moderate prices and with regularity. This assumption would seem to be allowed from the relative prices at which wood and coal could be furnished. From the following estimate, carefully prepared by the Coal Association of the Lower Ohio, it appears that coal, of which ten bushels are equal to a cord of cotton-wood, can be delivered on the Lower Mississippi at thirteen cents a bushel, and yield a fair profit. This equals cotton-wood at \$1 30 a cord, or less than half its average price. Probably it would be more economical for the sugar-planters to purchase coal at twenty-five cents a bushel rather than cut wood on their own lands, unless they were opening new lands for cultivation.*

* *The Cost and Profit of Towing Coal to the Markets on the Lower Mississippi.*—We publish to-day the estimates of the Association of Coal Owners and Lessees on the Lower Ohio, in reference to the cost of supplying the demand for our great staple in the markets from Cairo to New Orleans.

It is perfectly evident that the business of the river cities, from Louisville to New Orleans inclusive, depends to a great extent on the cheapness at which their steamers can carry freight. The only item of expense in running these boats that can be reduced in price is fuel—the substitution of coal for wood—and the placing of the coal at convenient depots at the lowest cost.

Fifteen dollars a cord for pine wood has been paid at New Orleans by Louisville boats within the past two years. Five and six dollars a cord for inferior cotton wood has been no unusual price on the Mississippi river during the same time.

Now, it is a fact beyond dispute, that ten bushels of our coals make more steam (in boilers properly arranged, and the coal burned in a proper manner) than can be made from a cord of cotton wood. It is evident from the estimate that these coals can be put at the depots from Cairo to New Orleans at an average cost of ten and a quarter cents per bushel, and, adding cost of selling and profits to those engaged in transporting and vending, the coals can be supplied at an average price of sixteen cents per bushel, or forty cents per barrel, thus lessening the cost of steamboat fuel one-half, (reckoning wood from Cairo to New Orleans at \$3 50 per cord,) and enabling the owners of these boats to compete with railroad freights.

We invite the attention of boat-builders, officers, and capitalists to the prospective importance and profit that must attend this branch of industry.

This is certain that the demand for coal will increase more rapidly than the supply. In 1845 the sales at the Cannelton

At a regular meeting of the Lower Ohio Coal Association, held at Cannelton, Indiana, on the 6th of November, 1854, it was

Resolved, That in a careful examination of the facts, gathered by the members of this association, as to the cost of towing coal in the lower Ohio and Mississippi rivers, the following estimate is believed to be substantially correct. Wherever a doubt has arisen, the highest estimate has been adopted. And in order to induce parties of skill and capital to engage in this business, this association agrees to furnish any responsible party, who will put into operation a tug and barges of the capacity stated in the estimate, coal at Cannelton, Hawesville, and Newburg, at seven cents per bushel; and at the Saline, Tradewater, and Caseyville mines at eight cents per bushel, receiving therefor satisfactory acceptances at four months, payable in New Orleans with interest and exchange added. And in case contracts cannot be made with individuals or companies, to furnish the supply on these terms, the members of the association will furnish the quantity proportionate to the capacity of each.

Cost of transporting one bushel of coal per mile, \$0,004—4-1,000 of a cent.

Cost of transporting one bushel to Cairo from Cannelton, 275 miles, one cent and one mill.

Cost of towing coal barges on Lower Ohio and Mississippi rivers, by a steam tug of 600 tons, 6 boilers, 25-inch cylinder, 10 feet stroke, drawing (light) 4½ feet.

FIXED CAPITAL.

| | |
|---|----------|
| Cost of boat..... | \$30,000 |
| Cost of twenty-four barges, \$1,500 each..... | 36,000 |

| | |
|------------|--------|
| Total..... | 66,000 |
|------------|--------|

INTEREST AND EXPENSES.

| | |
|---|---------|
| Interest on capital, at 6 per cent..... | \$3,960 |
|---|---------|

| | |
|--|--------|
| Wear and tear 20 per cent., insurance on boat and barges, at 9 per cent..... | 18,440 |
|--|--------|

Cost of running per month—

| | |
|--------------------------|-------|
| Captain, at..... | \$100 |
| Two pilots..... | 400 |
| Four engineers..... | 275 |
| One mate..... | 75 |
| Twelve men, at \$30..... | 360 |
| Cook and boy..... | 50 |
| Provisions..... | 159 |
| Oil..... | 51 |

1,470

| | |
|--------------------------------------|--------|
| \$1,470 per month, for 8 months..... | 11,760 |
|--------------------------------------|--------|

| | |
|---|--------|
| 600 bushels coal per day for 240 days, 144,000 bushels, at 7 cts..... | 10,080 |
|---|--------|

| | |
|---|--------|
| 12 trips, 88,000 bushels each, 1,056,000 bushels, at 7 cents..... | 73,920 |
|---|--------|

| | |
|--|-------|
| Insurance on \$73,920, at 10 per cent..... | 7,392 |
|--|-------|

| | |
|--------------------|-------|
| Contingencies..... | 1,000 |
|--------------------|-------|

| | |
|--|---------|
| Total cost of coal in New Orleans..... | 126,552 |
|--|---------|

| | |
|---|---------|
| 1,056,000 bushels, at 16 cents, or 40 cents per barrel..... | 148,960 |
| | 126,552 |

| | |
|------------------|--------|
| Nett profit..... | 42,408 |
|------------------|--------|

C. O. CHAMBERLAIN, *Secretary.*

| | | | |
|--|------------|------------|-----------|
| 1,056,000 bushels, at 60 cents per barrel..... | \$253,440, | \$126,552, | \$126,888 |
|--|------------|------------|-----------|

| | | | |
|---------------------------------|----------|----------|--------|
| Do.....do.....at 50.....do..... | 211,200, | 126,552, | 84,640 |
|---------------------------------|----------|----------|--------|

| | | | |
|---------------------------------|----------|----------|--------|
| Do.....do.....at 40.....do..... | 168,960, | 126,552, | 42,408 |
|---------------------------------|----------|----------|--------|

| | | | |
|---------------------------------|----------|----------|-----|
| Do.....do.....at 30.....do..... | 126,720, | 126,552, | 168 |
|---------------------------------|----------|----------|-----|

At 31½ cents per barrel, a nett profit of 10 per cent. on fixed capital of \$66,000 would be made.—*Cannelton Reporter.*

and Hawesville mines amounted to only 213,000 bushels. Now, this quantity and more is required every month when the river is navigable. Then but few of the steamboats took on, at any one time, over three or four hundred bushels; now the same boats would take as many thousand. The change of opinion on this subject, and the difficulties experienced by the early coal dealers on the river, may be understood from the fact that until the last two years that skillful and thrifty boatman, Captain Sturgeon, could not be induced to use coal except in his cabin. Now the Eclipse often leaves the Ohio with 10,000 bushels upon her decks, even to the displacement of freight.

But the steamboat and sugar mill demand for the fuel of the lower Ohio will soon be inconsiderable when compared with its demand for manufacturing purposes. In a few years the men of energy and capital in the west will wonder at their own blindness in not appreciating and profitably developing the immense natural advantages afforded by the minerals, the fuels, the subsistence, and by the easy transit on the lower Ohio for the manufacture of their own great staples. They will then understand the perspicacity of that veteran manufacturer and statesman, Richard Cobden, of England, who years ago declared that the chief seat of the cotton manufacture must eventually be on the coal fields of the central west, where heat, power, iron, subsistence, transit, and material could be brought together and combined cheaper than anywhere else in the known world.

PROGRESS OF THE PRINCIPAL CHURCHES IN THE UNITED STATES.

At the recent conference of the Evangelical Alliance in Paris, Dr. Baird, author of "Religion in America," submitted a report upon the State and Prospects of Religion in America, in which was the following sketch of the progress of the Protestant churches in the United States, which we copy from the New York Commercial Advertiser:

We will consider the principal churches in America in the order in which they appeared there.

1. **THE PROTESTANT EPISCOPAL CHURCH.**—The Protestant Episcopal church is the oldest in the United States. For a long time it was the established and dominant church in most of the southern colonies, and in that of New York, and greatly suffered from its connexion with the State. Its progress since its emancipation from that connexion has been steady and even rapid. In the year 1800, it is believed, there were 320 churches, 16,000 communicants, 260 ministers, and

7 bishops. In 1820 there were 9 bishops, and about 500 ministers, and probably 30,000 communicants. There are now 33 dioceses, 38 bishops, 1,714 clergy, and 105,350 communicants. Of the bishops two, at present, are not in service, and three were appointed bishops for missionary fields abroad, one of whom is in western Africa, and one in China. In the Sabbath schools connected with the Episepol church there were, in the year 1854, 69,000 pupils; the contributions of the church were, the same year, 398,650 dollars.

2. THE CONGREGATIONAL DENOMINATION.—This church, if we may employ the word in this sense in reference to a body which, like the Baptists, is not united by any general organization, was the second that appeared in this country. It has steadily advanced in numbers and influence from the first. It has 2,449 churches, 1,848 pastors, 479 ministers without charge, (such as professors, teachers, &c.,) and 207,608 members. The Congregational body was long the dominant denomination in New England, and was scarcely found beyond the limits of that part of the country. It now exists, however, in the States of New York, Ohio, Michigan, Illinois, Wisconsin, Iowa, and California. It has increased steadily and even rapidly, but not so rapidly as it would have done if so many of those who have emigrated from New England had not fallen into the Presbyterian and other churches, chiefly, until lately, because they could not find that of their education and preference elsewhere. No churches in the United States, it is believed, give more money, according to their means, than the Congregational for the advancement of the kingdom of God at home and abroad.

3. THE BAPTIST CHURCHES.—No denomination of evangelical Christians encountered so much opposition, both in the north and in the south, at the hands of the established churches in those portions of the country, in the colonial era, as the Baptists; and certainly not more than one church has had greater success during the last fifty years. A few figures will prove this. In 1707 there were but 17 Baptist churches in the United States; in 1740 there were 37; in 1762 there were 56; in 1792 there were 1,105 churches, 891 ministers, and 65,345 members; in 1812 there were 2,433 churches and 1,922 ministers; in 1854 there were of "Regular" or "Associated" Baptists 500 associations, 10,131 churches, 6,175 ordained ministers, and 808,754 members. If we include, as we ought, the anti-mission (hyper-Calvinists) "Free Will Baptists," "General Baptists," "Seventh Day Baptists," (71 churches, 77 ministers, and about 6,500 members,) Tunkevers, and "Disciples of Christ," (often called "Campbell-

ites,'') we must add at least 5,000 churches, 2,350 ministers, and 270,000 members, making the total of Baptists in the United States to be: 15,131 churches, 8,525 ministers, and 1,078,754 members.

4. THE PRESBYTERIAN CHURCHES.—In the year 1705 a presbytery, consisting of seven ministers from the north of Ireland and from New England, was formed. From this body arose the large body of churches which bear the distinctive appellation of Presbyterian. In 1800, it is believed, there were about 300 ministers, 500 churches, and 40,000 communicants or members. In 1832 there were 1,935 ministers and licentiates. In 1843 the two branches (for this church was divided into two bodies in 1838, called Old and New School) had 2,991 ministers and licentiates. In 1854-55 the statistics of these two bodies combined were as follows: 2 general assemblies, 52 synods, 254 presbyteries, 3,770 ministers, 346 licentiates, 648 candidates, 4,635 churches, 368,433 members; contributions to congregational, missionary, educational, and other religious objects, at least 4,000,000 dollars,* and 10 theological seminaries.

We subjoin, in a tabular form, the statistics of the other branches of the Presbyterian family or group of churches:

| | Gen. Assem. | Synods. | Presbyteries | Ministers. | Licentiates. | Candidates. | Churches. | Members. |
|------------------------------|-------------|---------|--------------|------------|--------------|-------------|-----------|----------|
| Associate Church..... | | 1 | 20 | 164 | 21 | 32 | 267 | 21,588 |
| Associate Reformed..... | | 5 | 34 | 315 | 30 | 60 | 375 | 30,000 |
| Reformed Presbyterian..... | | 2 | 13 | 108 | 15 | 22 | 160 | 14,000 |
| Cumberland Presbyterian..... | 1 | 15 | 48 | 800 | 400 | 80 | 1,000 | 100,000 |
| German Reformed..... | | 2 | 23 | 350 | 25 | 40 | 1,000 | 110,000 |
| Reformed Dutch..... | 1 | 2 | 28 | 332 | 15 | 35 | 322 | 36,297 |

Combining these six Presbyterian denominations or communions with the two great branches just spoken of, we have a total of 4 general assemblies or general synods, 79 synods, 417 presbyteries and classes, 5,889 ordained ministers, 822 licentiates, 915 candidates, 7,759 congregations, and 680,021 members or communicants. This Presbyterian family, or group of churches, has, in all, 19 theological schools under their control, and 30 colleges, with more than 5,000 students in them. In the year 1800, there were not more than 450 ministers, 7,000 congregations, and 60,000 members, in the United States. The three Scottish bodies,

* The statistics are partly those of May, 1854, and partly those of 1855.

the Associate, Associate Reformed, and Reformed Presbyterian,) now numbering 587 ministers, 802 churches, and 65,588* members, scarcely existed at that time. The Cumberland Presbyterian Church did not exist till 1810. The increase of the German Reformed Church has been great within the last forty years.

5. THE METHODIST CHURCHES.—This is the youngest of all the larger sisterhoods of churches in the United States, and is by far the most numerous. The first Methodist church in America was organized on Christmas Day, 1784, nearly seventy-one years ago. The progress of this branch of the evangelical body has been unparalleled. I am indebted to a minister in that body, (Rev. Mr. Butler,) every way competent to the task, for a very complete report, made up to the latest possible date, say the first of January, 1855. Of this report I can only give a resume.

As in the case of the Presbyterian body, the Methodist Church in the United States has several branches. There are the great branches called the "Methodist Episcopal Church" in the north, and the "Methodist Episcopal Church South." We subjoin a tabular view of the whole:

| | Bishops. | Elders. | Effective ministers. | Member- ship. | Missions. | |
|---------------------------|----------|---------|-------------------------|------------------|-----------|--------|
| | | | | | Home. | For'n. |
| Meth. Epis. Church..... | 7 | 235 | 4,579 | 783,358 | 823 | 47 |
| Meth. Epis. Ch. South.. | 7 | 131 | 1,672 | 579,525 | 271 | 34 |
| Unit. Breth. in Christ... | 4 | ..... | 250 | 67,000 | ..... | ..... |
| Evangelical Association.. | 2 | ..... | 195 | 21,076 | ..... | ..... |
| African Meth. Epis. Ch.. | 3 | ..... | 300 | 21,237 | ..... | ..... |
| Afr. M. E. Zion Ch..... | 2 | ..... | 155 | 6,203 | ..... | ..... |
| Meth. Protestant Ch..... | ..... | ..... | 916 | 70,015 | 103 | ..... |
| Wesley Meth. Connex'n.. | ..... | ..... | 310 | 23,000 | ..... | ..... |
| Prim. Meth. Ch..... | ..... | ..... | 12 | 1,100 | ..... | ..... |
| | 25 | 464 | 8,389 | 1,672,517 | 1,197 | 81 |

We add a few other statistics: These several branches of the Methodist family of churches have 132 annual conferences, 12,618 "local ministers," who preach more or less every week, 811 "superannuated ministers," many of whom preach a great deal; (making a total of 22,198 ministers of all classes,) 1,255,897 members of Anglo-Saxon origin, 209,580 of African origin, 100,562 Germans, 1,024 Swedes and Norwegians, 515 Welsh, 4,929 Indians; 13,146 Sabbath

* This figure is too low. The Associate Reformed Church must now have east 35,000 members instead of 30,000.

schools, 129,885 teachers in such schools, 691,700 scholars, and 1,959,628 volumes in Sunday school libraries; 17,949 conversions in 1854; 138,093 members of the mission churches in the home field; 56 missions, 30 "local preachers," 6,869 members, 83 day and Sunday schools, with 3,469 pupils, in the foreign field; amount expended in missions since 1819, 3,408,998 dollars.

There belong to the Methodist family of churches in the United States, 13,280 church edifices, with 4,342,579 sittings, valued at 14,822,870 dollars; amount of stock in "book concern," 696,325 dollars; and annual sale (in 1854,) 199,687 dollars; 10 quarterly and monthly periodicals, with a subscription list of 225,000; 24 religious newspapers, with a weekly circulation of 127,900; 24 colleges, with 99 professors, 1,779 students, 61,270 volumes in their libraries; property in funds, 1,327,111 dollars, and income of 43,824 dollars; 133 female seminaries and colleges, 11,678 pupils; 505,129 dollars vested in their behalf; amount given in 1854 to the Bible, tract, missionary, Sunday school societies, and for the support of superannuated ministers, 734,618 dollars.

Mr. Butler states that the amount invested by the Methodist churches in their "book concerns," colleges and seminaries, churches, &c., is 17,411,440 dollars; and he estimates the amount given in 1854, to the support of the ministers, religious societies, Sunday schools, &c., including income from the college and other vested funds, (but not including what was given in ordinary charities, building churches, &c.,) at 7,536,916 dollars; which, deducting the colored membership in the "Methodist Church South," is, on an average, more than five dollars per month.

He estimates the proportion of the population of the country which may be said to be under the spiritual care of "American Methodism," at 6,475,902.

6. OTHER CHURCHES.—THE LUTHERAN CHURCH.—This church is rapidly increasing among us, partly from conversion, partly from immigration. In 1841, the number of ministers was 406, congregations 1,200, communicants 104,000, under the control of one general synod, and 14 district synods. We have been unable to get hold of the statistics of this church for 1854; but, according to the best informed ministers of the body, whom I have within a few weeks consulted, I think the following general statement within the limits of exact truth: 1 general synod, 23 district synods, 980 ministers, 2,000 congregations, 190,000 communicants, 8 theological schools, 6 colleges, 10 or 12 male and female academies, a deaconess institute, (at Pittsburg,) an education society, a foreign mis-

sionary society, a home missionary society, a church extension society, 12 religious newspapers and other periodicals, 6 of which are in English, 5 in German, and 1 in Norwegian. The Foreign Missionary Society for several years aided Rev. Dr. Rhenius and the Palamcotta mission in India. It now has five ordained missionaries and their ladies in that country, 5 young men (natives) preparing for the work, 7 small congregations, 86 communicants, 24 schools, and 355 pupils. Its receipts the last two years were 11,797 dollars. The Home Missionary Society employs some 30 or 40 missionaries in the home field.

MORAVIANS, OR UNITED BRETHREN.—This is but a small body with us, having several communities, chiefly in Pennsylvania. They have 1 bishop, 23 churches, 28 ministers, and about 5,000 communicants. This body is distinguished for its morality, industry, and zeal, in the cause of missions.

MENONISTS.—This quiet and inoffensive body is estimated to embrace 400 churches, 250 ministers, and 30,000 members. Their congregations are small. Their assemblies are more frequently held in private houses than elsewhere. Their influence is very inconsiderable. They perform baptism by pouring water on the subject, and not by immersion or sprinkling.

WINEBRENNERIANS.—This is a small branch of German Christians, chiefly in the State of Pennsylvania, that take their name from a Mr. Winebrenner of that State, who is a most zealous and worthy man. They have 6 elders, 130 preachers, 168 churches, 415 preaching stations, and 17,500 members. The people, we ought to say, call their body The Church of God—not Winebrennerians.

THE ORTHODOX FRIENDS.—We know not the number of their "meetings," or of their "meeting-houses," or places of worship. The census of 1850 states that their places of worship were valued at \$1,713,757, and their church accommodation at \$287,073. From this we gather that there must be some six or seven hundred congregations. It would be right, perhaps, to say that of these 300 are orthodox, that is, hold to the inspiration of the scriptures, the divinity of the Son and of the Holy Spirit, and salvation only through the merits of Jesus Christ.

NUMBER OF EVANGELICAL MINISTERS AND MEMBERS.—From these statistics it would appear that, in 1854, there were in the United States, 27,740 ordained ministers of the gospel belonging to the several evangelical branches of the one true church of Christ. The number of the members or communi-

cants in such branches was 3,986,750. If we suppose the population of the United States to be at present 26,500,000, then there is one minister, on an average, for a fraction more than 937 inhabitants. And this leaves out of view the Evangelical Friends, whose statistics we do not possess, and also the ministrations of the "local ministers," who, as we have seen, exceed 12,000 in the Methodist body alone. This statement is more favorable than that which we quoted from the organ of the Presbyterian church. We have no doubt that the statistics of all the evangelical churches in the United States would show at this time a membership of four millions! Nor can the number of those who preach "Christ crucified" with a good degree of faithfulness and clearness, ministers having pastoral charges, professors in colleges and seminaries, licentiatess, local preachers, &c., be at all less than 40,000.

THE NON-EVANGELICAL BODIES.—We have hitherto spoken only of those who, in their symbols of doctrine and in their preaching, hold, according to the reformers and the apostles, the "faith that saves." But we should not give a correct view of the country, nor do justice to the voluntary or self-sustaining principle of religion with us, if we did not take proper notice of those who are not deemed evangelical in their doctrines and practice.

1. **THE UNITARIANS.**—This body is nearly confined to New England, and even there exists mainly in Massachusetts. They number about 260 congregations, as many ministers, and 35,000 members. Their increase does not correspond to that of the population of the country; or that of any of the large evangelical bodies. There are two parties among them; the more serious constitute one, and Theodore Parker, Ralph Waldo Emerson, and others of the "natural" school, who are Rationalists—Deists in other words—are at the head of the other. They have two theological schools, one at Cambridge, (near Boston,) the other at Meadville, in Pennsylvania.

2. **SWEDENBORGIANS.**—Of whom there may be 45 churches, 32 or 33 ministers, and 3,000 members.

3. **CHRISTIANS.**—Who are reckoned to have about 600 congregations, (generally small,) 500 preachers, and 30,000 or 35,000 members.

4. **UNIVERSALISTS.**—According to the most recent statement which they have published, there are of this body 828 churches, and 640 ministers. The number of the members of their churches was not given. It may be 50,000, although

we doubt it. There is, on the part of some of this body, as well as of the Unitarians, a growing sense of their need of more spiritual life.

5. ROMAN CATHOLICS.—At the commencement of this year, (1855), there were 7 archbishops, 33 bishops, 1,704 priests, 1,824 churches, 21 incorporated and 5 unincorporated colleges, (having 2,612 students,) 31 theological seminaries, (attached to as many dioceses and directed by the bishops,) with 500 students, and 117 female academies. As to communicants, or members of this body, we can say nothing definite. Archbishop Hughes of New York, when he says that there are three millions and a half of Roman Catholics in the United States, simply means to include all who attend the Roman Catholic Church, or have received the rite of baptism at the hands of the priest—men, women, and children. We are inclined to think there are not more than three millions, or at most three millions and a quarter of Romanists in the United States. The number of “communicants” can hardly exceed 12 or 14 hundred thousand.

6. JEWS.—The number of Jews is increasing in America. Their synagogues were estimated, in 1850, to hold 19,588 persons, and valued at \$415,600. We should suppose that the number of their synagogues may be 60 or 65.

SUMMARY OF THE NON-EVANGELICAL BODIES.—It will appear from what we have just said that the number of ministers in the non-evangelical bodies, great and small, is 2,486; of the congregations, 3,607; and that of the members, about 700,000.

COMMERCE OF THE OHIO AND MISSISSIPPI.

THE JUNCTION OF THE OHIO AND THE MISSISSIPPI, AND ITS RELATIONS CONSIDERED.—No American geographer can look on the map of his country without astonishment, nor trace its expanding outlines without admiration. Before the old States have authoritatively marked out their boundaries; before, with a single exception, they have delineated their topography or triangulated their areas, except for bases, along the Atlantic coast, new States, of vast extent and territory, with boundaries reaching beyond actual settlements for thousands of miles, rise up in the distance with a celerity that outstrips calculation. New centres of trade and commerce are discovered; new plains of exhaustless fertility are thrown open to the labor of man; new rivers are explored without rocks or rapids or waterfalls to interrupt their navigation;

and new mines are opened of metals and of coal, so rich, so measureless in their contents, that they may be considered as the store-houses established by Providence to meet the necessities of civilization among the future throngs who are destined to live beneath our western skies.

And, added to this, we find new climates, adapted to every variety of healthful vegetation, and that serenity of temperature which makes existence a blessing, and gives to social life its best forms, its highest powers, and to our political compact the largest constitutional freedom, and its most energetic and grateful defenders.

In this aspect it is in which physical geography delights to contemplate the condition and advancement of the great west, and by which it learns to value and properly to estimate its great destinies, and more than this, to discover by natural laws, by the structure and direction of mountain ranges, the source and course of rivers, to which even the most skillful engineering must give attention, where the coming generations of our countrymen must fix their habitations, and where emigration may best direct its footsteps now.

Not a hundred years ago (and what a contrast does this fact exhibit) the American colonists were better known in Europe by the name of "Bostonians" than any other; for the intercourse of the city of Boston with the mother country was more distinct and regular than at any other point, making it, in fact, the centre of the British trade.

The city of New York was, for a long time, rather the port of a private Dutch commercial company, and her commerce was under licences, and a closed one to the world at large. Newport, in Rhode Island, between the two, was, for a long time, though at a later period, a point of extreme interest in our then commercial world, and its fine harbor seemed formed to shelter the largest merchant fleets. It is a curious fact that at one time the French government entertained the serious design of purchasing Rhode Island as a naval station for its North American squadron! So, too, Philadelphia, at the close of the revolution, became the centre of a large trade, and suffered more from its vicissitudes than any other city in the United States. Matthew Carey, in an early edition of the *Olive Branch*, describes an almost entire cessation of business, and the sale of hundreds of houses for debts due foreigners, who, directly on the cessation of hostilities, threw large supplies of goods into Philadelphia to be sold at any price.

It is also a curious fact that this over-importation, a part

of which was actually hundreds of packages of second-hand clothes from Monmouth street, was attributed to the existence of free ports on the Delaware, and ports with light duties of about five per cent.; each State, until the adoption of the Constitution, having the right to adjust its own tariff.

When cotton and rice were cultivated as staples at the south, Charleston and Savannah became cities of more than their former importance; and when Louisiana was purchased from France, New Orleans rose into consequence as the seaport of the Mississippi; and, finally, on the successful introduction of steam upon its waters, became, beyond all comparison, the greatest southern commercial city of the Union. Here have continued to be received the vast products of the west for distribution around the Gulf, among the Antilles, and exported to every commercial port in Europe. Then, upon this development, others followed; and with the formation and growth of the States of Ohio, Missouri, and Illinois new local centres began to be discovered. St. Louis, Cincinnati, and Chicago, emerged from the nebulae of population around them, orbs of commerce, with their own spheres and systems, all becoming brighter, larger, and denser by the laws of commerce, which are but another form of the laws of nature.

So astonishing and so rapid have been these developments, one would suppose that even American progress would sometimes pause to rest itself and to take breath before resuming its march. Not so. What has been done is nothing to what will be done. What we have beheld with astonishment we shall see infinitely surpassed.

The Mississippi, the Ohio, the Missouri, with their numberless confluents and affluents, are found to lave the very gardens of the world—virgin lands of extraordinary fertility, offered freely by governmental law and a liberal policy, on the easiest terms by which land can be purchased anywhere in the civilized world, and of the easiest access, even to those of the smallest means. Millions of acres are reached through these great water courses, where the plough has but to make its furrow, and the first season of cultivation gives back a generous reward to the husbandman.

It is, indeed, no wonder that the western prairies and the western hill-sides attract such throngs of human beings from the sterile fields and barren mountains of Europe, where life is a toil, and bread is black and hard to be obtained, or that the Anglo-Saxon should seek here to find broad fields and acres, pecuniary independence, a house that is a castle, and

a harvest-home whose merry gatherings are competence and peace.

The finest lands in Kansas and Nebraska, beyond the Mississippi, may be reached in eight days from New York—less time, indeed, than it once took to navigate a sloop between New York and Albany, when the tides were more relied upon than even the winds.

These circumstances alone must lead to the most prodigious results, not only in our own day, but for centuries to come. The future is not distant when empires, in space and population, will reach from the valleys of the Mississippi to the Pacific; and unless we lose sight of our own true interests, under the aegis of constitutional freedom, with one interest, one destiny. The future balance of power, the latitude and longitude of its seat, we leave for politicians to calculate. The geographer and the man of business may, however, inquire where will be the centre of the exchange and distribution between the east and the west.

Will the fabrics of Europe and of the Atlantic States be exchanged for the “treasures of Cathay” and the products of China and Japan, on some highway of water common to the Union and within easy distance of all? If so, on the banks of what river, and in what valley will they mingle? Who can think of the answer that must ere long be given to this question without deep emotion!

And that question is a national one; for the United States in 1870 will, at its present rate of increase, have more than a hundred millions of inhabitants, and the largest portion of them will be the citizens of the western States. These, with the certainty of never-failing products from the richest soil on the globe, will be the best customers of the mercantile world for their fabrics, their metals, and machinery. To their doors all these will be taken, and from their store-houses and granaries we shall receive all that we require in return. But where will this centre show itself? What point? What miracle of adaptation offers us our solution?

That we shall have numerous great cities in the west is demonstrated by the history of other agricultural countries? Their connexion with, and their dependence on, pastoral industry for their growth are the best assurance of their permanence and greatness, and this has been the case from age to age. The most populous nations have owed most to the cultivation and fertility of their soil. The numerical strength of Hindostan, China, Egypt in earlier times, and Russia at the present day, is attributable to the predominance of agricultural pursuits. Merely commercial nations, as a rule,

never have had such permanence. The largest portion of the population of the British empire, considering its dependencies as a part, lies beyond the little islands where her wealth and her intellect enshrine themselves. The population of her foreign possessions is more than one hundred and forty-three millions. London, great as she is, was great before her commerce became important, and Liverpool is but the expression of the agricultural and manufacturing power of the great inland towns.

Russia, without any foreign commerce to speak of before the time of Peter the Great, has so extraordinary a population for numbers that she boasts every sixteenth man born in the world is a Russian.

On the other hand the purely commercial States are more unstable, more in danger of reverses; their pursuits are much at the risk of life. More seamen and travellers have been lost at sea during the last year than would populate a modern colony. The chief ports of ancient times and of the middle ages have notoriously declined, while the purely inland cities, sustained by agriculture and the arts of husbandry, have yet a prolonged existence. Jerusalem rebuilt survives the wonder of pilgrims and of history. So lives Pekin, and so Moscow, and Vienna, and Paris.

We may, therefore, pronounce with entire confidence on the certainty of the growth of our inland cities of the west when mere commercial towns may cease to exist.

As these remarks of ours may find their way into the hands of readers of peculiar tastes as well as scientific attainments, we think it best to support our leading opinions by tables which some of our most eminent engineers have arranged:

It will be seen by referring to the map of the United States that the rivers which pass the city of Cairo on their way to the ocean are destined to bear the produce of the States of Tennessee, Kentucky, Ohio, Indiana, Illinois, Iowa, Wisconsin, and Missouri, and also in the winter many of the products of Michigan, to say nothing of those parts of Virginia and Pennsylvania watered by the upper branches of the Ohio, or of the vast tract watered by the Upper Missouri.

| | <i>Acres.</i> |
|-------------------------|---|
| Kentucky contains..... | 25,920,000 |
| Ohio contains..... | 25,000,000 |
| Indiana contains..... | 23,040,000 |
| Illinois contains..... | 38,080,000 |
| Missouri contains..... | 39,424,000 |
| Iowa, say..... | 39,000,000 |
| Wisconsin contains..... | 35,300,000 |
| Making..... | <hr style="width: 100px; margin-left: 0; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="width: 100px; margin-left: 0; border: 0; border-top: 1px solid black;"/> |
| | 250,084,000 |

Thus, then, these eight States whose population is here

set down, are all dependent on the valley of the Mississippi, and on its rivers, for the outlet of the products and surplus resources derived from the cultivation of two hundred and fifty millions of acres, and five millions of inhabitants, five millions which in 1870 will be twenty-four millions. And even then there will be room for more; for while that estimate gives but sixty inhabitants to the square mile, we find that in England there are two hundred and twenty-five in the same space, in France one hundred and sixty-six, Belgium three hundred and forty-five, Austria one hundred and fifty-one. But in this table Kansas and Nebraska are left out, and the more distant territories on the slopes of the Rocky mountains.

We come next to consider what are the natural tendencies of the trade thus wonderfully developing, strengthened by the construction of numerous lines of railways, and what direction business must take, under the influence of natural causes assisted by those of art. These tendencies are no less than problems solved by physical geography.

The great valley of the Mississippi, laved by the father of waters, having seventy-six tributaries, all emptying themselves above its junction with the Ohio, is itself a marked feature on our map, a great channel of trade and commerce, in which there can be no competitor though it may have many allies. In this valley, wide, rich and fertile, we find one of the greatest rivers in the world, a facile route for the conveyance of human products, for the passage of emigrants and travellers, for the diffusion of knowledge and the formation and intercourse of States.

The Mississippi, then, with its affluent, the Missouri, and its confluent, the Ohio, is the great highway of the west: between its banks the tide of emigration will forever flow, and on its bosom the most precious freights never cease to be carried. The Nile itself, in its greatest usefulness, never approached in importance this river, Mississippi. Had its geographical direction been east and west instead of what it is, it might have become a barrier between the northern and southern States; but happily for us it is a perpetual bond of union, by its rise, its direction, and its terminus, and we should be the most ungrateful of nations if we did not so consider it.

Captain Cram, of the corps of United States Topographical Engineers, has not in the least overvalued, in his recent report on the valley of this river, the close relations it bears to its kindred valleys, and these are words of significance when we speak of those of the western world.

Captain Cram says that these valleys have an enormous extent. Into the Ohio drops that of Tennessee, with a river 850 miles long; the Cumberland, with one of 450; the Green river, 308; the Kentucky, 312; the Great Kanawha, 327; the Wabash, 477; the Monongahela, 216; the Muskingham, 216; the Alleghany, 300 miles. Into the Mississippi drops the Missouri, 3,217 miles long; the Kaskaskia, 250; the Illinois, 400; the Rock, 285; the Lower Iowa, 237; the Des Moines, 400; the Wisconsin, 580; the St. Peters, 400; while the Ohio and Mississippi themselves, receiving these rivers and draining these fertile valleys, are, the one 945 miles in length, and the latter 3,500. And nearly all these streams are navigable by steam, and all their waters may be said to mingle at one point, as if for the control and convenience of capital and enterprise, and all communicate with the ocean through the Gulf of Mexico. Taking them altogether, says Capt. Cram, we have a continuous navigable stream of 12,000 miles.

These are the great valleys, then, which are elongations of that of the Mississippi proper; but who has yet explored fully those which are watered by the fifty-six other rivers which swell its waters, none of them being less than one hundred miles, and several being four hundred miles in length?

The basin of the Mississippi has itself an area of over one million of square miles, double in size that of even the greatest rivers of China—such, for example, as the Yang-tse-Kiang.

North of the junction of the Ohio and Mississippi, the size of this basin is about 400,000 square miles, and this must by necessity discharge its products through and by the natural route.

But the eagle eye of American enterprise has already discovered all this. In fact, we are but registering a "foregone conclusion." The enterprising men who have congregated themselves on our great lakes saw at a glance that their location was favorable to two great interests—one eastwardly by the St. Lawrence or the New York canal; the other south and west to the cotton, sugar and tobacco regions, from which their valuable staples might be drawn, or to which merchandise might be sent at a cheaper rate than by any other routes.

It was this conception which brought Illinois into the field of internal improvement in advance, in fact, of her power to accomplish her purpose, and for a time endangered her credit and impaired her honor.

But the great work of the western world has finally been

accomplished, and we have a railway 704 miles in length, connecting Lake Michigan at its head with the Mississippi at a point where it has always deep water, and rarely, if ever, any obstruction from ice. Here we see the intelligent recognition of the greatness of the valley we have so imperfectly described, and not only that, but its results equally striking. For example, the northern terminus, Chicago, is mounting rapidly to the first rank of inland cities. We quote from the report of J. C. Bancroft Davis, esq., 1855, the following interesting facts :

“ CHICAGO.—The city of Chicago is the terminus of the Chicago Branch ; of the Aurora road, which is fed from the northern branch between La Salle, or even as far south as Bloomington and Freeport ; and of the Chicago and Galena Union road, which is fed by the northern branch from Freeport up.

It is situated near the head of Lake Michigan, at the outlet of the Illinois and Michigan canal. To the east it has an uninterrupted navigation through Lakes Michigan and Huron, the river and Lake St. Clair, the river Detroit and Lake Erie, of more than 1,000 miles, and by the Welland canal with the Atlantic Ocean. On the west may be seen, over a nearly level prairie, the woods which skirt the Des Plaines, flowing into the Mississippi ; and behind it, without interruption to the Mississippi, are the most fertile lands in the United States. The growth of the city is miraculous. In 1831 there were twenty-three families in the town ; its present population is 75,000.”

The southern terminus is at the new city of Cairo, of which we have obtained, by the kindness of a subscriber, some maps which explain themselves.

On the Mississippi, 180 miles above Cairo, at the Missouri, stands the great and prosperous city of St. Louis, a place whose increase has been equally marvellous. The following shows how population has followed its position in this wondrous region :

“ ST. LOUIS.—The growth of the city of St. Louis, situated on the Mississippi, a few miles below the junction of the Missouri, is nearly as remarkable as that of Chicago.

Population of St. Louis in 1820, 4,123 ; in 1854, 125,000.”

Of Cincinnati, another of these western marvels, 508 miles above the junction of the Ohio and Mississippi, we need not speak particularly. Its position does not require it of us at this moment.

There remains, then, but one more view to take of the subject at present under consideration. We have Chicago and St. Louis as great centres of western trade and western population, and in all human probability there is yet another which will vie with if not surpass them both. This is the city of Cairo, at the junction of the two rivers, situated 180 miles below St. Louis, 509 below Cincinnati, where, as we have already intimated, the river is always deep and there is no obstruction from ice. Its latitude is 30° N., and its latitude 12° E. from Washington. As those of all alluvial delta are, its site is not elevated to any great height. It is 40 feet above the ordinary level of the river; but like most of the towns on the Mississippi, like St. Louis or Natchez under the hill, or New Orleans, or like Albany on the Hudson river, is liable to partial overflows at extraordinary seasons. Human ingenuity has successfully opposed a barrier to these floods, and the managers of the Illinois Central Railroad are securing this result for its own advantage. Levees along the banks and sectional levees across the base of the triangle made by the two rivers, leave nothing further to be apprehended from this source. Indeed, it would not be difficult to raise the whole site of the town far above the line of possible inundation by the transportation of earth from the high ground above, just as in New York, where we constantly fill up our river fronts to a depth of 50 feet, or create acres of new land at the Battery. No fears, however, appear to deter the numerous settlers who are erecting permanent habitations at Cairo, and who observe the stout old trees which guard the river banks and flourish undisturbed by its waters.

So far, then, as this is to be considered, we find Cairo at the worst only to be in the category of all the river towns, except that it is to be much better protected by artificial works, more easily constructed than in any of the lower towns. It has another pre-eminent advantage. There is no interruption to navigation below it. Its channels are deep and never ice bound. In all seasons it is reached by vessels of the largest river capacity, and to it and about it are concentrating all the great railways of the west. Travellers and freight, therefore, brought to this point by railway or otherwise, are always sure of reaching their final destination. While St. Louis and Cincinnati are for months shut up by the ice and droughts, Cairo suffers by no such impediments. Mr. Davis speaks very favorably of its position. He says:

"Cairo is situated at the most important confluence of rivers in the world. Below it the Mississippi is navigable at all times to the ocean. The magnificent rivers above it, both

to the west and east, are closed in the winter by ice, and in the summer nearly or quite so by drought, making travel uncertain, freights variable, and obliging traders to lay in stocks of goods for months before they are wanted to insure a supply. The Illinois Central Railroad furnishes at present the only railroad connexion for the greatest commercial city upon the Mississippi, the greatest commercial city upon the Ohio, the greatest commercial city upon the lakes, and the principal mining region of the United States with this point. It is possible to make hereafter, if the divided business will warrant it, shorter roads to it both from Cincinnati and St. Louis. But it must ever remain the most direct route from Cairo to Chicago and Galena, passing to each of them through the most fertile land of Illinois.

"Important as are these connexions, Cairo possesses independent resources. The supplies of groceries and other heavy goods for the interior of Illinois will naturally be shipped from this place. In return it will naturally become the exporting point for the produce of that country going south.

"There is also excellent reason for believing that it will become the great depot for coal for Mississippi steamers. Steamers are now supplied with this article from mines up the Ohio. The nearest mine is at Muford, 115 miles above Cairo; the furthest, Pittsburg, 1,004 miles above it. It is brought down in flat-boats, towed by steam-tugs, and delivered, during the navigating season, directly from the river. But the winter and dry weather supplies also are obliged to be brought down during the season, and hauled up on the levee above high-water mark.

"The Desoto and Duquoin coal lies directly on the line of the Illinois road, from 61 to 74 miles from Cairo. It is of a quality quite equal to any of the Ohio coals.

"The amount of coal now required annually at Cairo is estimated at 450,000 tons."

But it is not our intention to enter into the considerations in detail which are urged by the peculiar friends of Cairo. We are looking at it as the centre of "one stupendous whole."

It would seem, then, almost past a doubt that the city of Cairo will become the great point to which the trade of the northwest and northeast must tend, and from which the supplies in return for these products must ascend for distribution. Here must be the great depot for freight and travel for the States dependent on the Mississippi, the Ohio, and the Missouri. Indeed, it may be styled the upper port of the Gulf, another and a better placed New Orleans.

But this point has other relations of a character which the political geographer may look at with no little interest. A great and important result is to be developed, enlarged, and retained, as yet not generally considered. The largest and most commercial States of the south upon the Atlantic will now seek here their share of this great western trade, for which New York, Pennsylvania, and Maryland have so warmly contended. It is found if a circle is described on the map of the United States, making the junction of the Mississippi and Ohio the centre, with a radius of 600 miles, it passes through the port of Charleston; if the radius be 560 miles, it will strike Savannah. But to reach New York, it must be at least 1,300.

If we pursue the same idea a little further we find a radius of 500 miles touches New Orleans, one of 450 Fulton, on the Red river, Mobile 440 miles, Philadelphia 800.

Thus we arrive at the important fact that it will be easier for the northwestern and western States, all that are compelled to use the Mississippi, Ohio, and Missouri to this point, to reach these southern Atlantic ports than those of Boston, New York, Philadelphia, or even Baltimore.

Already a line of railways from Charleston and Savannah is completed within 150 miles of Cairo. Thus, then, this point at the *embouchure* of the Upper Mississippi bringing with it the waters of the Missouri, the Illinois, the Wabash, the Ohio, the Cumberland, and the Tennessee, which last actually turn north to empty themselves at this geographical centre of rivers and States, will be within three days of Charleston and Savannah, and one day of Mobile when the intercommunication by railways shall be completed.

We perceive then at a glance what the two greatest southern Atlantic ports have the opportunity of gaining by a complete railway connexion with the Mississippi at Cairo. This connexion will be with a point as much beyond the influence of a severe climate as their own. If they make this, they may readily enter into a competition with Baltimore and New York for the western trade, and become the ports of the cities which, like St. Louis, are rising as by enchantment.

At present the railway communication between Charleston and Savannah and the valley of the Mississippi extends only to Nashville, on the Cumberland river. From that place to Cairo lines of steamers ply with great regularity. By a direct line the distance between Nashville and Cairo is about 150 miles. So that the distance from Nashville to Savannah by railway is about 583 miles, and to Charleston via Augusta

599 miles. About thirty hours, therefore, places the traveller from Nashville either at Charleston or Savannah, and a few hours more travel by rail would also place the traveller from Cairo at the same points.

This is but about nine hours more time than it takes the traveller from Baltimore to reach Wheeling, on the Ohio river; and when there he is more than 880 miles from Cairo, and controlled by a very uncertain navigation.

It is, therefore, a fixed fact that the great western trade and travel, at this moment, are more within the command of Charleston and Savannah than of Baltimore; that a large portion of both may be secured; that in the winter season it would have nearly all; and that Atlantic steamers and sailing packets would become matters of necessity to those cities.

Nor would this be all the result of a direct railway communication. Not only might Charleston and Savannah compete with Baltimore and New York, but with Mobile and New Orleans; and for the reason that the navigation of the Gulf is not only tedious but often dangerous. A sailing vessel is often as long getting from New Orleans to New York as it would be in crossing the Atlantic, besides being exposed to shipwreck on the Florida Keys and detention from cruisers in the Caribbean. In the mere difference of the rates of insurance these southern Atlantic routes would offer a large advantage.

We now come back, in conclusion, to the train of thought that induced us to look at the map of the United States with reference to its western topography, to see to what points were likely to become the new centre of trade and of population. The centre of population was, in 1787, on the right bank of the Susquehanna, in the State of Pennsylvania; in 1840 it had moved to Cincinnati; in 1870 it will, under the same circumstances and its own laws of progression, be near the junction of the Ohio and Mississippi; and still later, at some point to the westward, yet to be developed by the population of the new States and Territories.

We perceive that in all human probability, nay, we may almost consider it demonstrated, that the best point below the union of all the northern, northeastern, and northwestern tributaries of the Mississippi must be the centre of their trade. It is the nearest to all in the aggregate, and the most convenient for each individually. No ice, no want of water will obstruct navigation below this point. More favored in this respect than all other cities and towns above it on those tributaries, it presents advantages superior to them all.

It offers its stores of western products to the markets of New Orleans, Mobile, Charleston, Savannah. It commands the Gulf stream trade, and may that of the southern Atlantic. And it is thus we perceive the importance of this new centre, around which so many interests are to revolve.

Nor can we avoid the conclusion, to which we have been compelled to come, that if the southwestern railways commencing on the Atlantic be completed to Cairo, Georgia and South Carolina may boldly contend for the trade of Illinois and the other northwestern States and Territories. It has already been seen that they have the advantage over the northern ports, both as to climate, time, and distance. But may we not contemplate other results? Will not this new and profitable intercourse take away all excuses for any further jealousy of the northern States, which have advanced so rapidly under their system of internal improvements? Will there not be a greater equality in our domestic and foreign trade, strengthening our ancient resolution in the time that tried men's souls, to adhere to our Union and to denounce as treason the act which would impair its integrity? We are fond of comparative views of the works of nature, as well as those of art. So we may truly assert that nature, in her geographical arrangement of our northern continent, has placed the Mississippi in the best of all places for us. It has no local character, for it is too vast. It waters many States; it is the outlet of many streams; the drainer and fertilizer of many noble valleys. Scarce interrupted by a rock, or a cataract, it is navigable for thousands of miles; if it gathers its waters in the north, it pours them all out into the south—cooling the cauldron of the Gulf and tempering its climate. It is the very bond of peace and brotherhood. It holds us together by a perpetual chain, and every new advantage it confers upon us should brighten, not destroy, it.

As geographers, as statesmen, as men of business, and above all, as patriots, we must rejoice at developments such as these we have attempted to point out. We have found a new centre of our vast western population and its accompanying trade; we have shown what important results are in progress of accomplishment, and how, by natural causes as well as by the ingenuity of man, the United States are becoming more homogeneous.

To the west, then, we will look for the solution of the future.

THE PRESENT AND THE FUTURE OF NEW ORLEANS.

We published in our last the aggregate results of New Orleans commerce for 1854-5, and will give the details in our next and succeeding numbers. The following remarks, however, made by the Bulletin, are worthy of reflection by all who are interested in the growth of the city:

In closing this review of the course of our various markets for the year, we cannot omit the opportunity of reverting to the general considerations referred to in our preliminary remarks, and again calling the attention of our mercantile friends to the necessity of more earnest and united efforts to promote the prosperity of our trade, and the policy of the community at large to sustain our commerce, as the great means of adding to their general wealth, increasing population, and ultimately enhancing the value of real estate.

With regard to the western trade, we see such apathy on the part of our own citizens, while, at the same time, the Atlantic cities are engaging in the competition for it with increased means and energy, that we almost despair of retaining even that portion of it to which we are fairly entitled by our position, and which, with more capital and greater enterprise, we could exclusively command. To illustrate this it is only necessary to refer to the course pursued at the north in relation to the incoming cereal crops, which promise such abundant returns. Having already the facilities of canals and railroads extending to the remote west, and acting in harmony for their great purpose of diverting from the southern markets the western trade, their merchants might rest, contented with their apparent superior resources, and await the regular course of trade to bring the rich harvests of the west to their wharves. But not satisfied with the advantages they already possess with these material facilities, and their usual abundant supply of capital and banking facilities for the movement of the crop, they are stimulating its progress by an increased expansion of currency, to be employed in liberal advances to the western trade. Thus, some weeks ago, the New York press chronicled the negotiations pending for the use of large amounts of New England currency, to be used for the purpose; and now we are informed, by one of their leading organs, that owing to the demand at the west for currency, for the purpose referred to, large amounts of the notes of the New England banks had been "arranged for" and transmitted to the west in place of coin; that this operation had enabled these institutions to re-issue the circulation which had been returned during the bank contraction of last winter; and that in consequence of these supplies of currency the balances at the credit of western banks and bankers in New

York had not been drawn for as expected, but, on the contrary, were increasing ; and that hence it was evident that the crops would be sent forward without disturbing the present monetary position of the east and the west. Our readers are too well aware of the nature of these "operations," "arrangements," and other financial mysteries, not to know that their result is to fill the west with the notes of distant corporations, which once put in circulation by being paid to the farmer for his produce, remain for so long a time afloat that before they can, in the usual course of trade, be returned to their place of issue, the produce on which they have been advanced will have gone forward and be converted into exchange or specie for their redemption. It is true that by the creation of this fictitious capital speculation may be unduly excited, the commission merchant may be induced to advance more than the value of the produce, and ultimately be ruined in futile attempts at reclamations, and we may see a recurrence of those periodical embarrassments to which northern enterprise is constantly exposing northern commerce ; but in the interim the north will have enjoyed the benefit of the trade ; it will have helped to build up her cities, to furnish customers to her importers, to stimulate her manufactures, and, by a variety of smaller channels, to aggregate an increased population in her commercial marts, and advance the general prosperity. Hence it is that the population of the northern emporium has been augmented to upward of six hundred thousand souls—exhibiting an increase within a few years equal to the entire population of New Orleans. With such a formidable and daring rival, we must confess, we cannot but regard the western trade as steadily gliding from our hands, and that in a comparatively short period we may be destined to enjoy its profits only when an active export demand, booming rivers, and low freights give our natural facilities such a superiority over the artificial connexions of the north as will enable us to contend against her superior enterprise and capital. But, unfortunately for New Orleans, she is not exclusively dependent upon the western trade. Her port is, in fact, the outlet for an immense extent of country, unsurpassed for its fertility and the value of its crops ; and while we regard with such interest the industrial and financial progress of the united north and west, we should never forget that their prosperity is sure to increase our own by enhancing the means of the consumer and extending the demand for the consumption of our leading staples. The old apprehension that the production of cotton would exceed the demand has ceased to alarm the planter, and we would be

hardly too sanguine to anticipate that in a very few years, the growth of this staple, in the Mississippi valley, might be doubled without advancing beyond the progress of consumption.

The internal improvements we have commenced, and those which are projected, cannot fail to bring into cultivation extensive districts to which our market has been hitherto inaccessible; and the time is fast approaching when we shall need population and slave labor more than we shall want lands or the means of carrying their products to market. Under the inevitable influence of the laws of supply and demand, this must lead to a gradual emigration to the south of slaveholders, with their slaves, from the States where they are now employed in the cultivation of crops, for which free labor can furnish a substitute. To stimulate this movement should be one of our chief objects. To illustrate our capacities and wants, in this connexion, we would refer to the following estimates, which show the immense extent of rich but unproductive cotton lands within the circle of our immediate influence. For example: taking the yield of 1852-3 as a basis, we find that the Louisiana crop was set down at 200,000 bales, raised on 400,000 acres of land, by 50,000 laborers; Arkansas at 100,000 bales from 200,000 acres and 25,000 laborers; and Mississippi at 650,000 bales from 1,300,000 acres and 162,000 laborers. Here is an aggregate of 950,000 bales from 1,900,000 acres, in three States, containing 12,000,000 acres of cotton lands, and capable of producing 6,000,000 bales, or double the entire crop of the United States at the present time, and requiring double the force now employed in cotton planting in the whole country, or six times the present amount in the States mentioned. A large portion of the lands that constitute this 12,000,000 acres are at present comparatively worthless from their inaccessibility; but railroads, and other internal improvements, are rapidly obviating the objection, and bringing within reach of our market lands which for all practical purposes have hitherto been valueless. Hence the great want to be supplied to increase the crop is not lands, of which there are a present abundance, but hands to work them; and if we have to rely upon only the natural increase of our own slave labor, it is manifest a long period must elapse before these southern wildernesses can be made productive. Regarding them, then, as an element to increase, by their production, the commerce of this city, it is equally manifest that there are two great objects to which the people of New Orleans should direct their attention. The first is the extension of our railroads, and other internal

improvements, so as to place within reach of this market productive cotton lands now inaccessible; the second, to invite, from the Atlantic cotton and western slave States, the immigration of planters with their slaves. Here, then, is a pregnant subject of inquiry. What advantages can we offer to such immigrants? Are our lands more productive than those of other States, and equally salubrious, whether for the white man or the negro? What statistics can we present in reply to these questions? and, if we can furnish evidence to warrant affirmative answers, what means should we adopt to hasten the movement referred to. In some of the western States and Territories strong efforts are constantly made to induce free laborers to immigrate within their borders, whether from the Eastern States or from Europe, for free white labor is the only power that can be used to bring forward the cereal wealth of their soil, and without it their boundless prairies would continue as desert as the ocean, and their fertile valleys remain a savage wilderness. And so of the south. Slave labor is the only power by which our uncultivated cotton lands can be made productive; and if there be any means by which that power can be increased, no effort should be spared by the people of New Orleans to use them to their full extent; we say by THE PEOPLE, for all are interested—the mechanic, the shop-keeper, the capitalist, and the owner of real estate, are all deeply interested as well as the merchant; but the merchant has the most at stake, and his enterprise, intelligence, and energy, should lead the column.

In these speculations we have confined ourselves to our leading staple, and the importance of inducing the immigration of slaveholders, not because cotton is the only basis of our prosperity, or slave labor the sole means of increasing our resources, but because it most forcibly illustrates our views. We are well aware of the importance of our other crops, and that the arguments applied to cotton can also, to a great extent, be used in relation to sugar. Nor do we overlook the importance of encouraging free laborers, also, whether from the west or the north, or from foreign countries, to supply us with the essential material of an industrial population, not only for such manufactures of the raw material as can be carried on by us with profit, but for all the superior branches in mechanical pursuits, which are above the capacity of the negro. Least of all do we overlook the fact that there are extensive districts of country, within our immediate control, unsurpassed for their salubrity, which furnish a wide field for the husbandman, and which,

if their peculiar advantages of an exuberant soil and genial climate were appreciated abroad, would soon be filled with a numerous, industrious, and hardy population.

To effect these various objects, union among our merchants is the first requisite, and to establish it we must once more suggest the expediency of an efficient organization, which for these, and all other purposes affecting our commercial welfare, should be the rallying point of our entire mercantile community. As we have before stated, something more is required than mere individual effort; and a chamber of commerce, organized on a sufficiently comprehensive basis, would, we suggest, meet the exigency and supply the want. Such an organization, with subordinate departments for the various branches of our business—boards of trade, for example, for cotton, sugar and molasses, tobacco, western produce, groceries, dry goods and imports, and navigation, which should receive periodically the reports of these several bodies, and act upon their recommendation for the general benefit with united power, could not fail to have a powerful influence.

The entire business of the city would thus come directly under the supervision of the chamber, and whenever it might be expedient to influence either municipal, State, or federal legislation, for the common interest, it could be done more efficiently by such a mercantile agency than by almost any other means. Opportunity would be afforded for the comparison of the various taxes on our trade with those of other cities, which, developing whatever is impolitic, wrong, or oppressive, would lead to its correction or removal; those internal improvements which prove of the most practical benefit to the city would be encouraged and promoted; and every enterprise calculated to increase our population and wealth would receive from it an active stimulus.

The chamber of commerce of New Orleans should embrace within its sphere all our domestic, interior, and foreign relations; it should take a comprehensive view of the field before it, and act with the circumspection, judgment, and energy, characteristic of the mercantile class.

An annual development of the trade of our city from such a source, comprehending detailed reports from each of the important interests we have designated, could not fail to have a beneficial influence in attracting, by its exposition of our resources, a productive population, and stimulating every remunerative branch of business.

If the people of New Orleans could be induced to unite for the promotion of its commercial and industrial improvement, independent of the tyranny of party, and superior to the in-

fluences of cliques, and classes, and individual interests, there can hardly be a doubt that a cheering change would be soon manifest in our progress, and that our southern emporium would attain that commanding position to which she is entitled by her unequalled natural resources.

MINING AND MANUFACTURES.

COTTON MANUFACTURES.

At a recent meeting of the Manchester Chamber of Commerce, some interesting statements were made by the president, Mr. Bazly, upon the cotton manufacture of Great Britain. From his remarks we quote the following :

"In looking at the state of our foreign trade, he found that America was one great cause of the embarrassment that had prevailed amongst commercial classes in this country. The people of America were no doubt seriously embarrassed by the state of their financial arrangements ; but they seemed to overlook the fact that they were paying for their manufactures through their protective system a much larger amount, year by year, than had been involved by their unfortunate system of banking. He computed that not less than 30 millions sterling per annum were absorbed in the United States by the absurd protective system that ruled there. He hoped that the people of America would direct their attention to the cause of their suffering ; and that we should, at no distant day, have a reduced tariff from that great and growing country. (Hear, hear.) Our exports to France were really very trifling ; and the same unfortunate policy prevailed in France that prevailed in the United States. He had calculated, upon moderate estimates, that the people of France were now paying upwards of 50 millions sterling per annum, as the price of the protection with which they were blessed. (Hear.) France would probably be the richest country in Europe, if a liberal commercial tariff were established ; but there must almost of necessity be great embarrassment so long as this false policy was maintained. We looked for a relaxation of the restrictive tariffs in every part of the world ; and the example of England, he had no doubt, was really producing the most beneficial effect with every existing government. He would not anticipate the contents of the report by alluding to other subjects ; but he would inform gentlemen present that some months ago he was called upon by the eminent publishers of Edinburgh, the Messrs. Black, to

revise an article in the *Encyclopædia Britannica*, upon cotton and cotton manufacturers. He wrote a new article upon cotton, and considerably enlarged the article upon cotton manufacturers; and in the course of the enquiries and investigations he was led to make, he had been enabled to prepare a table, which he regarded as of some importance, for it was the first time that the manufacture of cotton had been shown in the way it was shown in the table. The Board of Trade very kindly gave him all the facts which he required from the department; and therefore, in the calculations he had made, he had depended entirely upon governmental authority. The Board of Trade, in publishing the returns of the exports of cotton, had usually stated the gross value sent out of the United Kingdom; but he had ascertained to what particular country every parcel of cotton manufactures was sent during 1853; he was thus able to show the value of the goods sent to each country, and by comparing that with the population, and ascertaining the amount per head, we should be able to define more correctly than upon any other principle the extent of our trade with any particular country.

"In the British dependencies in the East Indies we had a population of 150 millions; and the value of cotton manufactures exported to them in 1853 was £5,680,000, or equal to 9d. per head. To Russia, with its population of 67,000,000, our exports amounted to £180,000, or equal to 6-10d. per head; but to those parts of Russia supplied through ports in the Black Sea, with a population of 3,000,000, our exports amounted to £13,000, or 1 $\frac{1}{4}$ d. per head. France had 36,000,-000 (or nearly 37,000,000) of population; and to France, in 1853, we sent cotton manufactures to the value of £155,710, or at the rate of 1d. per head. To British North America, with a population of 2,456,000, we exported £749,000 worth of cotton manufactures; which was equivalent to 6s. 1 $\frac{1}{4}$ d. per head. The United States, with a population of 27,000,-000, took to the value of £4,182,901, or at the rate of 3s. 1d. per head. By the assistance of his friend, Mr. John Leisler, of this city, an eminent foreign merchant, he had been enabled to approximate as nearly as possible to the value of cotton manufactures consumed in Great Britain and Ireland; and he found that while our exports amounted to £32,712,000, we retained at home not less than £21,224,000 worth of cotton manufactures—showing that the people of the United Kingdom consumed our staple manufacture at the rate of 15s. 5d. per head per annum. The result in gross was this:

"To the population of the globe, about 850,000,000, Great Britain supplied cotton manufactures to the extent of very

nearly £54,000,000 sterling, being an average of 1s. 3½d. per head. The £53,000,000 or £54,000,000 sterling representing the products of the cotton industry of Great Britain and Ireland, might be regarded as one-half the cotton industry of the world. Foreign countries, besides taking one-half of the raw cotton sent into the market, received large supplies of cotton yarn from Great Britain; and in Asia and Africa cotton was still largely spun by hand. Hence the cotton industry of the world might be valued at £120,000,000 sterling, which would give an average consumption per year, for every man, woman and child upon the globe, 2s. 9½d. worth of cotton manufactures, or about fourteen yards each per annum of excellent calico."

JOURNAL OF EDUCATION.

EDUCATION IN TEXAS.

Texas has one of the largest school funds in the Union, as appears from section 1 of the school law of Texas, which reads as follows:

"SEC. 1. Be it enacted by the legislature of the State of Texas, That the sum of two millions of dollars of the five per cent. bonds of the United States, now remaining in the treasury of the State, be set apart as a school fund for the support and maintenance of public schools, which shall be called the special school fund, and the interest arising therefrom shall be apportioned and distributed for the support of schools as herein provided."

The State is divided into school districts, with three trustees to each. The chief justice and county commissioners constitute a board of school commissioners for each county, whose duty it shall be, during the year eighteen hundred and fifty-four, to form their respective counties into school districts of convenient size, and number the same, so that each district in a county shall be known by its appropriate number. Provided, however, that in forming said districts the convenience of neighborhoods shall be regarded as much as possible, and each school district shall contain a sufficient number of children for the maintenance of a school.

It is the duty of the assessor and collector of each county in the State to make out a list of all the free white population in his county between the ages of six and sixteen years, particularly designating the number of persons between such ages in each school district, and transmit the same under his

hand and official signature to the county clerk of the county, and a certified copy thereof to the treasurer of the State, on or before the first day of July, in each and every year.

The fund is distributed to each county "according to the number of its population of scholastic age," between six and sixteen. The money is applied only to the payment of teachers. Each county must furnish its own school-house and fixtures before it can draw any of the fund. If the fund is inadequate to pay the teachers, the trustees are required to collect the balance from the patrons of the school.

The treasurer of the State is *ex officio* superintendent of the common schools. The law reads as follows:

"SEC. 16. That the treasurer of the State shall be *ex officio* superintendent of the common schools in this State, and it shall be his duty, immediately after the first day of September, in each and every year, to record the abstracts of children of lawful age in the different counties and apportion the moneys as herein contemplated, distributing to the several counties the amount to which each is entitled, according to its scholastic population, ascertained in the manner herein prescribed, and also for the amount due for the tuition of children exempt from tuition fees; and it shall further be the duty of the treasurer of the State to provide the necessary record books, to be by him kept exclusively for recording abstracts, as herein contemplated, and keeping a full and perfect account of all investments and moneys belonging, or in any way appertaining, to the common school fund of this State, and all apportionments and distributions of money by him made for common school purposes; and he shall report to the governor annually, on or before the 1st day of October, the condition of the common school fund, and also make to each regular session of the legislature such suggestions in relation to the common school system as may be deemed advisable; that the fiscal scholastic year shall commence on the 1st day of September, and end on the 1st day of August in each and every year, from and after the 1st day of September next."

COAL TRADE OF PITTSBURG.

According to a report read before the Pittsburgh Board of Trade, the amount of coal shipped from that port during the year ending September 1st, 1855, was 14,140,048 bushels floated in boats and flats, 507,277 bushels by canal, and 19,114,450 bushels in barges towed by steam tugs,—making an aggregate of 33,761,775 bushels.

JOURNAL OF HOME AND FOREIGN COMMERCE.

COMMERCE OF GREAT BRITAIN.*

The following return shows the comparative exports of Great Britain for 1854, as compared with 1852:

British Exports.

| | 1850. | 1852. | 1854. |
|----------------------------|------------|------------|------------|
| Chili | £1,119,121 | £1,167,494 | £1,421,855 |
| Peru | | 1,024,007 | 949,283 |
| Brazil..... | 2,452,103 | 3,464,394 | 2,891,840 |
| Uruguay..... | 732,172 | 615,453 | 462,210 |
| Cuba | | 1,033,396 | 1,038,159 |
| Mexico | 978,441 | 366,020 | 430,936 |
| Venezuela..... | | 273,738 | 300,899 |
| New Granada..... | 216,751 | 502,128 | 270,722 |
| Hayti | 939,802 | 251,409 | 195,653 |
| British West Indies | 2,671,969 | 1,908,552 | 2,000,380 |
| British North America..... | 2,089,397 | 3,065,364 | 5,980,876 |
| Total..... | 11,009,686 | 13,671,955 | 15,960,219 |
| Australia..... | 398,471 | 4,222,205 | 11,931,352 |
| United States..... | 6,132,346 | 16,568,757 | 21,410,369 |
| Germany | 4,463,605 | 7,820,480 | 8,564,827 |
| France..... | 475,884 | 2,731,286 | 3,175,200 |
| Russia..... | 1,489,538 | 1,099,917 | 54,301 |
| Egypt | 110,227 | 955,701 | 1,253,353 |
| Turkey | 1,149,310 | 2,079,913 | 2,758,605 |
| Danubian Provinces..... | | 269,533 | 16,402 |
| East Indies..... | 4,139,319 | 7,352,908 | 10,025,909 |
| China..... | | 1,917,244 | 533,639 |
| All others..... | | 19,381,476 | 21,414,724 |
| Total..... | 37,164,372 | 78,076,854 | 97,298,900 |

From 1831 to 1842 the English trade to her colonies increased more than to any other countries. Two causes were in operation, in 1842, against that extension. These were the China war, which produced its effect on that trade, and the emancipation in the West Indies that diminished the ability to buy goods. Two other causes, however, came into operation that had a powerful influence in extending the European trade. These were the extension of the Zollverein union, by which the means and ability of 28,000,000 of Germans to consume goods was greatly increased, and, by so doing, counteracted the effect of high duties on foreign goods, and accelerated their import. This is apparent in the exports

* From the United States Economist.

to Germany, Prussia, Holland, France, and Belgium, through all which countries the goods proceed to the Zollverein. Another and still more efficient cause was the large imports of corn into Great Britain from those countries. In 1836 England bought no foreign corn. In 1838-9 she bought largely, and, as the trade was a new one, she was obliged to pay in specie for the article. The continuance of the trade caused a reciprocity of commerce, and although England bought, in 1842, 22,202,512 bushels of wheat, she paid in goods only, and coin accumulated in the vaults of her bank to a great extent. Of the 22,205,512 bushels purchased by her, up to 1842, 17,536,477 bushels, worth \$25,000,000, were taken of the north of Europe. This naturally produced that increased export of goods to those countries which is apparent. The facts which have wrought out this increase of trade have been in opposition to the policy of the European governments. England was, however, compelled by a necessity above all law to buy bread. At first she was compelled, as the effect of former prohibition, to pay for it in specie. Such a trade cannot, however, exist. There can be no large continued purchases without corresponding sales; and as she was compelled to continue her purchases her exports necessarily increased, to the mutual benefit of England and Europe.

The growth of the United States, the progress of Europe, and the events of the gold discoveries and the existing wars, have operated greatly to change the currents of trade.

A large increase of business over 1852 is apparent; but nearly the whole increase, £19,700,000, was to Australia, East India, and the United States; and the increase was by no means a mark of prosperity, since the goods sent to Australia glutted the market and were nearly all lost; most of those sent to the United States were consigned and sold at ruinously low rates; and the India market absorbed more silver than was profitable. The China war greatly affected exports thither; but some were sent, via India. The war does not seem materially to have affected commerce. To France and Turkey there was an increase of the materials of war, and the exports to Russia and the Danubian provinces were nearly cut off. The year of 1853 was one of great speculation in the United States, and the exports hither from Great Britain were larger than ever before. As compared with 1853, the leading shipments were as follows:

| | 1853. | 1854. |
|------------------------------|-------------|-------------|
| Australia..... | £14,513,700 | £11,931,352 |
| East Indies..... | 8,185,635 | 10,025,905 |
| North American Colonies..... | 4,898,544 | 5,980,876 |
| Other Colonies..... | ..... | ..... |
| Total Colonies..... | 33,382,202 | 33,898,313 |
| United States..... | 23,658,427 | 21,410,369 |
| Germany..... | 8,145,801 | 8,564,827 |
| Russia..... | 1,228,404 | 54,301 |

The exports to the northern continent of America have been as follows, at different periods :

| | North American Colonies. | British West Indies. | United States. | Total. |
|-----------|--------------------------|----------------------|----------------|-------------|
| 1814..... | £4,399,753 | £7,929,699 | £8,129 | £11,437,581 |
| 1820..... | 1,559,104 | 4,197,151 | 6,124,825 | 11,971,145 |
| 1830..... | 2,089,327 | 2,589,949 | 6,152,383 | 10,824,679 |
| 1842..... | 2,333,225 | 2,591,425 | 3,528,807 | 8,463,757 |
| 1851..... | 3,813,707 | 2,201,032 | 14,362,977 | 20,377,716 |
| 1852..... | 3,065,064 | 1,908,551 | 16,134,397 | 21,107,913 |
| 1853..... | 4,898,544 | 2,198,230 | 23,658,427 | 30,755,201 |
| 1854..... | 5,981,875 | 2,008,380 | 21,410,369 | 29,399,625 |

The first line here shows the influence of the war which then existed. Great Britain sent as much goods here in that year as in 1820, but they came through the Canadas and West Indies. From the declaration of peace down to a late period, it was a leading object with the British government to prevent the trade of the two American continents from being concentrated in the United States, sooner or later, as the capital of the country and facilities for the transaction of business increased. British exports to their own West India colonies have become very small, by reason of the lessened ability of the islands to purchase. The trade of the whole continent has, however, increased ; and the removal of restrictions upon intercourse between the United States and the colonies, together with the operation of the warehousing system, which has conferred upon American vessels the ability to make up assorted cargoes suited to all markets, on terms equal to any of the London docks, have contributed to draw all trade into the United States ports, and to make them the entry ports for European goods destined for the consumption of any American people. The following shows the United States exports to American countries, at different periods :

United States exports to the countries of America.

| | 1830. | 1845. | 1854. |
|---------------------------------|------------|------------|-------------|
| Swedish West Indies..... | \$552,700 | \$88,886 | \$12,741 |
| Danish West Indies..... | 1,688,022 | 833,503 | 928,924 |
| Dutch West Indies..... | 319,492 | 352,817 | 371,380 |
| French West Indies..... | 792,241 | 599,907 | 651,673 |
| British West Indies..... | 140 | 4,504,367 | 5,475,407 |
| British N. Am. Colonies..... | 3,650,031 | 4,844,966 | 15,204,144 |
| Cuba..... | 3,437,060 | 6,203,808 | 8,228,116 |
| Spanish West Indies..... | 245,636 | 688,148 | 990,886 |
| Hayti..... | 714,791 | 1,327,891 | 1,680,187 |
| Mexico..... | 985,764 | 784,154 | 2,091,870 |
| Honduras..... | 25,132 | 188,494 | 203,913 |
| Central America..... | 138,456 | 41,548 | 250,539 |
| New Granada..... | | 490,715 | 825,254 |
| Venezuela..... | 316,732 | 530,568 | 1,131,604 |
| Brazil..... | 1,600,999 | 2,413,567 | 4,046,857 |
| Argentine Republic..... | 425,220 | 483,561 | 658,720 |
| Chili..... | 913,718 | 1,257,360 | 1,942,330 |
| Peru..... | 32,400 | 33,424 | 651,707 |
| Other South American Ports..... | 9,190 | 75,328 | 47,241 |
| Northwest Coast..... | 28,392 | 416,025 | ..... |
| Total..... | 15,880,119 | 25,709,624 | 44,850,752 |
| All other countries..... | 43,681,960 | 73,590,152 | 207,197,054 |
| Total..... | 59,462,029 | 99,299,776 | 252,047,806 |

The opening of British ports to American shipping, under the proclamations of 1828-29, was followed, it appears, by a large increase in business, and the increase of trade between the islands and the United States may, in the stationary condition of those islands, account for a portion of their diminished traffic with the mother country. The concentration of American business in American ports is going rapidly on, and it has received great aid from the gold discoveries, since that event compelled the exploration of Central America and the construction of works that so facilitate the transportation as to bring hitherto inaccessible points within a short distance, at cheap rates. It has become incumbent upon the United States government to obtain rights of way and to protect its citizens in Central America, where improvement marches with rapid strides. The New Granada canal opens up a rich field for American enterprise. The Panama railroad has already united the oceans. The Mexican government is falling to pieces and will speedily be enveloped. British exclusiveness is broken down in all those places where her policy formerly presented barriers to American progress, and she is herself reaping large benefits from the

change, although she must follow the United States in the development of American trade. The condition of Cuba, alone, presents a chief difficulty to the extension of trade; but the march of events is such as soon to sweep away the difficulties. On the north the spirit of trade overcome the exclusiveness of British aristocracy, and the trade of the Canadas is becoming merged in that of the Union.

BANKS OF THE UNITED STATES.

The following table from the report of the Secretary of the Treasury will show the comparative condition of the banks of the United States, according to their returns, nearest the 1st of January, 1837, 1854, and 1855:

| | 1837. | 1854. | 1855. |
|--|---------------|---------------|---------------|
| Banks..... | 788 | 1,208 | 1,300 |
| Capital..... | \$290,772,091 | \$301,376,071 | \$332,177,288 |
| <i>Resources.</i> | | | |
| Loans and discounts | 525,115,702 | 557,397,779 | 576,144,758 |
| Stocks | 12,407,112 | 44,350,330 | 52,727,082 |
| Real estate..... | 14,064,451 | 22,367,472 | 24,073,801 |
| Other investments..... | 10,423,630 | 7,589,830 | 8,734,540 |
| Due by other banks..... | 59,663,910 | 55,516,085 | 55,738,735 |
| Notes of other banks..... | 36,533,527 | 22,659,066 | 23,429,518 |
| Specie fund..... | 5,366,500 | 25,579,253 | 21,935,738 |
| Specie | 37,915,340 | .9,410,253 | 53,944,545 |
| <i>Liabilities.</i> | | | |
| Circulation..... | 149,185,890 | 204,689,207 | 186,952,223 |
| Deposites | 127,397,185 | 188,188,744 | 190,460,342 |
| Due to other banks..... | 62,421,118 | 50,322,462 | 4,151,697 |
| Other liabilities..... | 36,560,289 | 13,439,276 | 15,599,623 |
| Aggregate immediate liabilities | 339,004,193 | 443,200,113 | 422,509,262 |
| Aggregate immediate means..... | 139,479,277 | 162,164,657 | 155,048,537 |
| Specie in depositories..... | | 25,136,252 | 27,188,889 |
| Total specie in banks and treasury depositories..... | | 84,456,565 | 81,133,435 |

The increase of bank capital since 1837 is not at all in proportion to the great increase in the number of banks; nor, be it also remarked, is the increase of accommodation afforded. The aggregate specie strength is, however, much greater. The circulation is not so large as in 1854, but it is over thirty millions greater than in 1851; over fifty-four than in 1848; and over one hundred and twenty-eight millions than in 1843. The depositories have immensely increased. The total of immediate liabilities in 1855 was four hundred and twenty-

two and one-half millions, and that of immediate means only one hundred and fifty-five millions, showing a greater disproportion than in 1837 or 1843. In 1843 the proportion between immediate liabilities and immediate resources was one hundred and thirty-six millions to seventy-four millions, or less than double. In subsequent years the proportion is nearly treble.

TRADE OF RICHMOND.

We are indebted to an intelligent friend for the following carefully prepared and interesting tables of exports to foreign ports during the quarter ending September 30, 1855, and same time in 1854:

| Destination. | TOBACCO. | | | |
|----------------|------------|-----------|------------|-----------|
| | 1855. | | 1854. | |
| | Hogsheads. | Value. | Hogsheads. | Value. |
| Australia..... | 1,490 | \$95,270 | 20 | \$6,720 |
| Bremen..... | 6,232 | 1,088,770 | 3,893 | 214,184 |
| England..... | 2,118 | 279,701 | 2,736 | 441,571 |
| Holland..... | 578 | 52,508 | 2,661 | 352,755 |
| Italy..... | 1,940 | 305,693 | 1,640 | 234,858 |
| Scotland..... | 307 | 75,000 | ..... | ..... |
| | 12,756 | 1,896,942 | 10,950 | 1,250,088 |

| Destination. | FLOUR. | | | |
|------------------------|----------|-----------|----------|-----------|
| | 1855. | | 1854. | |
| | Barrels. | Value. | Barrels. | Value. |
| Australia..... | 9,828 | \$103,751 | 11,420 | \$115,131 |
| Brazil..... | 42,519 | 549,272 | 20,259 | 191,121 |
| British provinces..... | ..... | ..... | 837 | 6,663 |
| | 52,347 | 553,023 | 32,516 | 312,915 |

Comparative statement of the exports of all articles during the quarter ending September 30, and same time last year.

| Articles. | 1854. | | 1855. | |
|------------------------------------|-----------|-----------|-----------|-----------|
| | Quantity. | Value. | Quantity. | Value. |
| Bacon, pounds..... | 385 | \$59 | 240 | 450 |
| Biscuit and ship bread, boxes..... | 4 | 80 | ..... | ..... |
| Books and maps..... | ..... | 50 | ..... | ..... |
| Cables and cordage, cwt..... | 50 | 900 | ..... | ..... |
| Corn, bushels..... | 3,600 | 2,952 | ..... | ..... |
| Flour, barrels..... | 32,516 | 312,915 | 52,347 | 553,023 |
| Furniture..... | ..... | 150 | ..... | ..... |
| Lard, pounds..... | 1,866 | 2,427 | ..... | ..... |
| Lumber, M feet..... | 5 | 112 | ..... | ..... |
| Manufactured tobacco, pounds..... | 22,902 | 8,156 | 40,000 | 4,800 |
| Manufactures of cotton..... | ..... | 1,796 | ..... | 5,614 |
| Manufactures of wood..... | ..... | 2,005 | ..... | 60 |
| Paper and other stationery..... | ..... | 435 | ..... | 319 |
| Rice, barrels..... | 100 | 948 | ..... | ..... |
| Rosin and turpentine, barrels..... | 748 | 1,621 | 100 | 350 |
| Soap, pounds..... | ..... | ..... | 8,000 | 375 |
| Staves, &c., M feet..... | 79 | 3,519 | 37 | 623 |
| Tobacco, hogsheads..... | 10,950 | 1,250,008 | 12,756 | 1,896,842 |
| Wheat, bushels..... | ..... | ..... | 3,414 | 6,851 |
| All other manufactured..... | ..... | 6,840 | ..... | 450 |
| All other raw..... | ..... | 474 | ..... | 12 |
| ..... | ..... | 1,595,527 | ..... | 2,469,469 |

Comparative statement of the imports into Richmond from foreign ports during the quarter ending September 30, 1855, and same time in 1854.

| Articles. | 1854. | | 1855. | |
|---|-----------|---------|-----------|---------|
| | Quantity. | Value. | Quantity. | Value. |
| <i>From England.</i> | | | | |
| Blankets..... | ..... | ..... | ..... | 4297 |
| Carpeting..... | ..... | ..... | ..... | 1,983 |
| Woollen goods..... | ..... | ..... | ..... | 1,416 |
| China, porcelain, earthen, and stoneware..... | ..... | ..... | 62,820 | ..... |
| Railroad iron, tons..... | 23,747 | 47,779 | 30,090 | 51,035 |
| Salt, bushels..... | 7,148 | 1,407 | ..... | ..... |
| <i>From British Provinces.</i> | | | | |
| Plaster, unground..... | ..... | 180 | ..... | 678 |
| Cod liver oil, gallons..... | 20 | 31 | ..... | ..... |
| Herrings and shad, barrels..... | 3,385 | 9,779 | 768 | 2,346 |
| Mackerel, barrels..... | 176 | 622 | ..... | ..... |
| Essence of spruce, barrels..... | 2 | 18 | ..... | ..... |
| Feathers, bags..... | 3 | 62 | ..... | ..... |
| <i>From Brazil.</i> | | | | |
| Coffee, pounds..... | 480,000 | 67,443 | 801,600 | 66,997 |
| ..... | ..... | 130,141 | ..... | 124,752 |

RECAPITULATION.

| | Exports. | Imports. |
|---|-------------|-----------|
| During the quarter ending September 30, 1855..... | \$2,464,469 | \$124,752 |
| During the quarter ending September 30, 1854..... | 1,595,527 | 130,141 |
| Increase | 873,942 | ..... |
| Decrease..... | ..... | 5,389 |

EXPORTS FROM THE UNITED STATES.

Official statement of the exports of cotton, breadstuffs, provisions, and rice, from the United States, for the fiscal year ending June 30 :

Export of breadstuffs and provisions, June 30.

| Articles. | Packages. | Value. |
|--|------------|--------------|
| Flour, barrels..... | 1,204,540 | \$10,896,908 |
| Wheat, bushels..... | 798,884 | 1,324,246 |
| Corn, bushels | 7,807,585 | 6,961,571 |
| Meal, barrels..... | 267,208 | 1,237,122 |
| Rye meal, barrels..... | 35,264 | 236,248 |
| Bread, barrels, &c | 153,287 | 657,783 |
| Rye, oats, and other small grain..... | ..... | 238,976 |
| Total breadstuffs..... | ..... | 21,557,854 |
| Pork, barrels | 294,440 | 4,390,970 |
| Lard, pounds..... | 29,025,492 | 4,018,016 |
| Bacon, pounds..... | 38,188,989 | 3,195,978 |
| Beef, barrels and tierces..... | 113,994 | 2,600,547 |
| Butter, pounds..... | 2,315,249 | 418,723 |
| Cheese, pounds..... | 4,846,568 | 514,034 |
| Total breadstuffs and provisions ..... | ..... | 36,696,131 |
| Total of same in 1854..... | ..... | 65,901,240 |
| Decrease in 1855..... | ..... | 29,205,109 |

Tobacco export, June 30, 1855.

| Treasury year. | Hogsheads. | Value. |
|----------------|------------|--------------|
| 1855..... | 150,213 | \$14,712,468 |
| 1854..... | 126,107 | 10,016,046 |
| Increase..... | 24,106 | 4,696,422 |

Rice export, June 30, 1855.

| Treasury year. | Tierces & bbls. | Value. |
|----------------|-----------------|-------------|
| 1855..... | 72,294 | \$1,717,953 |
| 1854..... | 105,121 | 2,634,127 |
| Decrease..... | 32,827 | 916,174 |

Distribution of tobacco export of 1855.

| Country. | Hogsheads. | Value. |
|--------------------|------------|-------------|
| France..... | 40,866 | \$4,103,595 |
| Great Britain..... | 24,303 | 3,507,760 |
| Bremen..... | 35,058 | 2,497,730 |
| Holland..... | 17,124 | 1,068,782 |
| Spain..... | 7,524 | 756,848 |
| Belgium..... | 4,010 | 381,723 |
| Sardinia..... | 3,311 | 383,245 |
| Papal States..... | 2,446 | 276,019 |
| Lombardy..... | 2,945 | 412,224 |
| Tuscany..... | 1,562 | 171,621 |
| Sweden..... | 1,713 | 171,015 |
| Africa..... | 1,018 | 167,320 |
| Other points..... | 5,434 | 814,586 |
| Total..... | 150,213 | 14,712,469 |

Comparative export of the great staples.

| Articles. | 1855. | 1854. |
|---------------------------|--------------|--------------|
| | Value. | Value. |
| Cotton..... | \$88,143,844 | \$93,596,220 |
| Bread and provisions..... | 36,696,131 | 65,901,240 |
| Tobacco..... | 14,712,468 | 10,016,046 |
| Rice..... | 1,717,953 | 2,634,127 |
| Total..... | 141,270,396 | 172,147,633 |

SHIPPING OF THE WORLD.

The immense increase of the shipping of the United States (says the Baltimore American) furnishes one of the strongest and most satisfactory criterions of the magnitude of our commerce and the unparalleled prosperity of the country. It will doubtless surprise most of our readers to learn that, both in number of vessels and tonnage, the United States are ahead of Great Britain. The following table shows the com-

parative strength of the commercial marine of the principal nations of the world in 1854:

| Country. | Vessels. | Tonnage. |
|--|----------|-----------|
| United States..... | 40,500 | 5,661,416 |
| Great Britain and Colonies..... | 35,960 | 5,043,270 |
| France | 14,354 | 716,130 |
| Spain | 7,986 | 379,421 |
| Sardinia, Tuscany, Naples, Sicily, and Papal States..... | 17,066 | 546,021 |
| Austria | 7,603 | 324,447 |
| Greece..... | 3,970 | 264,981 |
| Turkey | 2,220 | 182,000 |
| Holland..... | 2,090 | 456,462 |
| Hamburg | 369 | 119,884 |
| Bremen..... | 500 | 160,000 |
| Prussia..... | 1,990 | 369,729 |
| Denmark | 4,789 | 208,109 |
| Norway..... | 852 | 368,362 |
| Sweden | 886 | 147,928 |
| Mexico and the States of South America..... | 1,530 | 193,735 |
| Russia..... | | 105,509 |

The shipping of the world is estimated at 145,500 vessels, and the aggregate tonnage at 15,500,000. Hunt's Magazine estimates that at \$50 a ton the shipping of the world is worth the enormous amount of \$775,000,000. Of this fifteen and a half millions of tonnage, more than ten and a half millions belong to the Anglo-Saxon race.

PITTSBURGH.

We have received the first annual report of the Board of Trade at Pittsburgh. It embraces much information in relation to the growing trade of that important city. The following is an extract:

Average number of arrivals and departures at this port annually.

| | |
|---------------------------------|-------|
| 1st class steamers | 1,712 |
| 2d class steamers..... | 3,634 |
| Keel-barges and flat-boats..... | 3,230 |
| <hr/> | |
| | 8,576 |

| | |
|--|---------|
| Estimated amount of merchandise arriving and departing from this port in steam and keel boats, annually, by the river..... | Tons. |
| Lumber..... | 740,460 |
| Coal, in barges and flats, departing | 50,000 |
| | 847,700 |

1,638,160

Steamboats built and registered in this district in 1854.

| | |
|---------------------------------|---------------|
| | Tons. |
| Passenger steamers, 51..... | 11,044 44-100 |
| Freight and tow boats, 19 | 2,793 33-100 |
| | <hr/> |
| | 13,797 47-95 |

| | | |
|--|-------------|------------|
| Carrying capacity..... | 25,000 | tons |
| Cost..... | \$1,255,338 | |
| Consuming, per 24 hours, 28,000 bushels of coal. | | |
| In addition to the above there were eight boats built, but not yet registered, amounting to 3,500 tons, and costing..... | 300,000 | |
| | | 1,555,338 |
| Lumber in rafts, departing..... | 1,225,000 | |
| Amount of coal shipped from here, bushels..... | 23,738,906 | |
| Worth when sold..... | 3,000,000 | |
| <i>Manufactured here and sent by river.</i> | | |
| Iron and nails..... | \$7,500,000 | Valued at— |
| Castings | 700,000 | |
| Stoves | 300,000 | |
| Springs and axes, vices and spring steel..... | 566,000 | |
| Shovels, forks, picks, axes, &c..... | 390,000 | |
| Locks, latches, scales, &c..... | 350,000 | |
| Iron safes..... | 60,000 | |
| Steam engines, (exclusive of those placed in boats here,) sugar and cotton mills, &c..... | 500,000 | |
| White and red lead and litharge..... | 640,000 | |
| Cotton yarns, sheetings, &c..... | 949,000 | |
| Glass—Flint..... | \$650,000 | |
| Window..... | 800,000 | |
| Bottles, vials, &c..... | 400,000 | |
| | | 2,050,000 |
| Wagons, carts, wheelbarrows, carriages, &c..... | 350,000 | |
| Plows and farming implements..... | 75,000 | |
| Furniture..... | 100,000 | |
| Salt in barrels | 80,000 | |
| Soda ash, 2,000 tons..... | 130,000 | |
| Ale, porter, beer, and malt..... | \$780,000 | |
| Of the above shipped by river..... | 450,000 | |

COINAGE.

The coinage of France, the United States, Great Britain, and Russia, for the last two years, was as follows:

| | 1853. | | 1854. | |
|-------------------|--------------|-------------|--------------|------------|
| | Gold. | Silver. | Gold. | Silver. |
| United States.... | \$55,213,907 | \$8,907,571 | \$52,094,595 | 8,619,270 |
| France | 62,035,899 | 3,766,833 | 98,812,500 | 375,000 |
| Great Britain.... | 58,270,126 | 3,401,270 | 20,091,680 | 677,600 |
| Russia..... | 15,723,750 | 2,700,100 | 15,723,750 | 2,700,100 |
| Total..... | 191,243,682 | 18,845,774 | 186,722,525 | 12,371,970 |

The coinage of gold has taken the place of silver almost altogether, except in the United States, where the new coinage act has operated effectively since 1852. The aggregate coinage of the four countries, during seven years, has been as follows :

Total coinage of gold and silver in Great Britain, France, the United States, and Russia, for the last seven years—1848 to 1854, both inclusive:

| Year. | Gold. | Silver. | Total. |
|-------------------|--------------|--------------|--------------|
| 1848..... | \$33,285,710 | \$23,428,570 | \$56,714,280 |
| 1849..... | 38,500,000 | 44,642,860 | 82,142,860 |
| 1850..... | 71,500,000 | 21,642,860 | 93,142,860 |
| Three years..... | 142,285,710 | 89,714,290 | 233,000,000 |
| 1851..... | 152,642,860 | 17,244,290 | 169,857,150 |
| 1852..... | 120,357,150 | 18,857,150 | 139,214,300 |
| 1853..... | 191,785,720 | 19,142,860 | 210,928,580 |
| 1854..... | 184,214,290 | 12,214,290 | 196,428,580 |
| Four years..... | 659,000,020 | 67,428,290 | 716,428,610 |
| 1848 to 1854..... | 791,285,730 | 157,142,880 | 948,428,610 |

In the three years ending with 1850, silver was 40 per cent. of the whole coinage; in the four years ending with 1854 it was only 9 per cent. of the coinage in the above four countries. In 1850 Belgium stopped coining gold, and in 1853 Holland ceased to coin that metal. In Austria, where the currency is paper really, and silver legally, that metal has been coined as usually, and the material has been furnished from France, where it has been supplanted by gold. Including all the above countries, with Prussia, the coinage has been, in seven years, \$1,097,584,300, of which about 15 per cent. has been silver. The production of that metal is now greater.

A document has been published in Mexico, under the title of "Foreign Commerce of Mexico since the Conquest," which contains interesting statistics concerning the amount of gold and silver yielded by the mines of that country. The entire worth of gold and silver stamped by the different mints of Mexico from 1524 to 1852, together with manufactures from the precious metals, amounts to the sum of \$3,562,205,000, viz:

| | |
|---|-----------------|
| Silver coined in the city of Mexico..... | \$2,248,165,000 |
| Gold coined in the city of Mexico..... | 111,806,000 |
| Total..... | 2,359,971,000 |
| Silver coined in other Mexican towns..... | 359,621,000 |
| Gold coined in other Mexican towns..... | 15,113,000 |
| Total..... | 374,734,000 |
| Gold and silver manufactures | 827,500,000 |
| Grand total | 3,562,205,000 |

The whole of this sum, with the exception of about

\$100,000,000, has been, it is supposed, exported. In the year 1690 the amount of silver coined in the city of Mexico was \$5,286,000; in the following year it was \$6,214,000. From 1691 until 1700, the quantity decreased until it amounted to only \$3,379,000. After the latter year it steadily rose until it reached, in 1809, its highest point, *viz*: \$24,708,000. In 1810, only \$17,951,000 were coined; in 1811, but \$8,956,000, and so on till 1837, when but \$516,000 of silver were issued by the Mexican mint. In 1838, \$1,089,000 were coined, and the quantity again began to increase. In 1852, it amounted to \$2,770,000.

ICE—HOW MUCH OF IT IS USED AND WHERE IT COMES FROM.

Ice is an American institution—the use of it an American luxury—the abuse of it an American failing. As in the matter of luxuries, as in goverment, we are democratic and popular, the great mass of people moving, living, and having a being in America, can and do enjoy those creature comforts of existence daily, which are, in European nations, the Sabbath wonder of the humbler domestic circles. Very often that Sabbath does not come once a week for large portions of the people in Ireland, Scotland, parts of France, Germany, Italy, England, and, in fact, all over the European continent. The use of ice is esteemed a rare blessing there, and like all good things beyond the water, is adopted by the aristocracies. Dietetically, the poorer, and even middle classes, know nothing of ice. It is confined to the wine cellars of the rich, and the cooling pantries of first class confectioneries. The climate in some portions of the countries specified does not render it an actual necessity, but at certain periods of the year, in almost all of them, the temperature does not vary much from that in New York, with the difference that our heat is more continuous.

In America the use of ice is as widely extended among the people as the heat is, and with a very trifling individual cost. We use it for seven or eight months of the year—all the year in the south; and even in New York there are numbers of families who ice their Croton throughout the winter. In this latter particular, and in the too free and careless use of it in the hottest days of summer, the abuse of the luxury consists. It is considered by physicians as a tonic; but an excess, as in the use of intoxicating liquors, will, in all probability, produce diarrhoea.

Ice is the most tolerated equalizer of the day, bringing within the benefits of its mission every type of liquor imbibed, assuaging the tongues of oratorical politicians of all classes, and sending a judicious temperature through the diaphragm

of every excited individual who breathes in our midst. From the epicurean loiterer who enjoys his iced champagne and trout over Lake Saratoga, to Prof. Water Cure who, though he never gets "three sheets in the wind," constantly gets more than that number in water; from Hon. "Brandy Smash" to the dispenser of root beer and soda, with "every variety of choice syrups;" from the steam factories of ice cream to the cent-a-class hand manufactories on the pathways and pavements in and about the Park, all are enlivened, cheered and actuated by ice. In workshops, composing rooms, counting houses, workmen, printers, clerks, club to have their daily supply of ice. Every office, nook or cranny, illuminated by a human face, is also cooled by the presence of his crystal friend.

It is as good as oil to the wheel. It sets the whole human machinery in pleasant action, turns the wheels of commerce, and propels the energetic business engine. In every house almost there is a vein of ice, begining with the blocks in the cellar and going through the refrigerators and filters on every story to the attic.

While the extended use of ice is paramount to all, few, while imbibing their glass of iced water, the cost of which is entirely too fractional to calculate, think of the value or the capital invested in dispensing it. In this respect it resembles the daily paper, which is furnished every morning for two cents, and in the perfection of which hundreds of dollars, and great mental and physical activity and energy are daily expended. To get one of the minor items in the paper, as the little piece of ice in the glass, hundreds of miles have been travelled perhaps, and a great expense incurred.

The statistics of ice are exceedingly interesting, and illustrate the go-ahead principle and enterprise which characterize every branch of our commercial tree. It is just fifty years since the idea of dispensing ice to southern latitudes entered the brain of a Boston merchant, Mr. Tudor. It was a thoroughly worthy notion of a solid man of that City of Notions. For twenty years, considerable disappointment, with various success, attended his efforts, but ultimately his persistency and activity furnished the southern States and the West Indies with the frozen delicacy, and a lucrative business opened up. In 1834 the East Indies and Brazil became his business clients. Other large houses engaged in the ice-farming in Massachusetts and New York, and at present the value of the ice farms of those States fully equals, if it does not exceed, the value of the rice crop of Georgia.

Boston chiefly supplies the southern ports with ice, and

the increase of the trade in that city may be seen from these facts. In 1832 the whole amount shipped from port was 4,352 tons. In 1845 there were 48,422 tons exported; in 1853, 100,000 tons; and in 1854, 156,540 tons. It is stated that "the railroads receive some \$90,000 for transporting ice, and those who bear it over the sea from \$400,000 to \$500,000." In Hunt's Merchants' Magazine for the present month, there are a mass of very interesting statistics on the ice trade, from which we compile the tables which we shall present to our readers. Boston finds favorable markets in Havana, Rio Janeiro, Callao, Demerara, St. Thomas, and Peru. Its best customers, however, are the southern States of the Union and the East Indies. Boston sent last year—

| | Tons. | | Tons. |
|--------------------------------|---------|--------------------------|---------|
| To southern States | 110,000 | To England | 825 |
| To East Indies | 14,284 | Consumed in Boston | 60,000 |
| To other places named above .. | 31,361 | | |
| Total..... | | | 216,540 |

In the ice-houses in the vicinity of Boston there were 300,000 tons stored last year. In the exportation of the amounts given above, there were 520 vessels engaged, the heaviest tonnage in the Boston trade being in the ice business.

In New York, nearly the entire crop of ice is used at home. It is gathered at the following places, and in the annexed proportions:

| | Tons. | | Tons. |
|--------------------------------|---------|--------------------|---------|
| Rockland Lake | 120,000 | Athens | 15,000 |
| Kingston Creek and vicinity .. | 60,000 | Tarrytown | 12,000 |
| Highland Lake | 30,000 | New Rochelle | 10,000 |
| Rhinebeck | 18,000 | | |
| Catskill..... | 20,000 | Total..... | 285,000 |

Besides this, for the general home market, the following amounts are secured and laid up in the annexed towns on the Hudson for their own use:

| | Tons. | | Tons. |
|--------------------|--------|---------------|-------|
| Albany | 20,000 | Hudson | 4,000 |
| Troy | 10,000 | Newburg | 4,000 |
| Poughkeepsie | 4,000 | | |
| Total..... | 44,000 | | |

Central and western New York are supplied from Onondaga Lake. The whole amount secured in New York may be estimated at about 340,000 tons, of which only about 20,000 are exported. The value of this crop is fully three-fourths of a million dollars annually, the lowest price being \$2 per ton—large quantities being sold at \$2 50 and \$3. The western markets—Cincinnati, Chicago, &c.—are supplied from the great lakes, and the markets on the Mississippi river principally from the town of Peru, in Illinois.

In Boston there are between two thousand and three

thousand persons employed in the business season. In New York the amount is less, as the exportation is little. About nine thousand persons are employed in the entire States by ice, and it is computed that a capital of over six million dollars is invested in it.

PHILADELPHIA.

ASSESSMENT OF REAL AND PERSONAL PROPERTY.

The following is given as the official assessment of the value of the property in the city of Philadelphia, as assessed for city and State purposes:

| | | |
|--|-----------|---------------|
| Real estate | - - - - - | \$142,136,202 |
| Number of personals | - - - - - | 94,566 |
| Value of furniture | - - - - - | 2,166,450 |
| Money at interest, mortgages, stocks, &c | - - - - - | 17,609,898 |
| Horses and cows, number | - - - - - | 501,929 |
| Emoluments of office | - - - - - | 133,334 |
| Gold levers, number | - - - - - | 3,880 |
| Plain gold and silver levers | - - - - - | 1,121 |
| Plain silver watches | - - - - - | 121 |

The real estate, as assessed in the various wards, the money at interest, &c., will be seen by the following table:

| Wards. | Real Estate. | Money at interest, mortg'e, stocks, &c. |
|---------------------|--------------|--|
| First..... | \$3,502,180 | \$2,000 |
| Second..... | 4,512,957 | 17,650 |
| Third..... | 2,522,058 | ..... |
| Fourth..... | 2,570,640 | 1,220 |
| Fifth..... | 13,264,600 | 5,615,198 |
| Sixth..... | 20,753,782 | 796,422 |
| Seventh..... | 6,250,300 | 1,008,355 |
| Eighth..... | 12,024,872 | 3,543,531 |
| Ninth..... | 15,265,300 | 2,300,924 |
| Tenth | 7,754,533 | 1,394,899 |
| Eleventh | 4,306,544 | 142,090 |
| Twelfth | 3,773,265 | 411,775 |
| Thirteenth..... | 4,059,035 | 229,608 |
| Fourteenth..... | 4,851,446 | 12,400 |
| Fifteenth..... | 5,771,831 | 116,310 |
| Sixteenth..... | 2,607,195 | 7,100 |
| Seventeenth | 1,840,321 | ..... |
| Eighteenth..... | 2,300,297 | 11,612 |
| Nineteenth | 5,052,730 | 5,500 |
| Twentieth..... | 4,951,048 | 43,780 |
| Twenty-first..... | 2,647,200 | 259,697 |
| Twenty-second..... | 3,000,000 | 960,009 |
| Twenty-third..... | 4,248,800 | 549,240 |
| Twenty-fourth | 4,305,248 | 250,967 |
| Total | 142,136,202 | 17,609,898 |

AGRICULTURAL AND HORTICULTURAL JOURNAL.

AGRICULTURE IN ALL AGES.

No. II.*

II. THE AGRICULTURE OF THE GREEKS.—Revelation has taught us to offer up our prayers and thanksgivings for all benefits to the one omni-beneficent Creator and provider of the universe. The less enlightened ancients, whose religion was mythological, equally convinced with ourselves of the existence of some divine first cause and providence, like us offered up their votive petitions and hymns of praise, though the objects of their worship were as many as the benefits or the evils to which man is subject.

Agriculture was too important and too beneficial an art not to demand, and the Greeks and Romans were nations too polished and discerning not to afford to it, a very plentiful series of presiding deities. They attributed to Ceres—as their progenitors, the Egyptians, did to Isis—the invention of the arts of tilling the soil. Ceres is said to have imparted these to Triptolemus, of Eleusis, and to have sent him as her missionary round the world to teach mankind the best modes of ploughing, sowing, and reaping. In gratitude for this, the Greeks, about 1356 years before the Christian era, established, in honor of Ceres, the Eleusinian mysteries, by far the most celebrated and enduring of all their religious ceremonies; for they were not established at Rome till the close of the fourth century. Superstition is a prolific weakness; and, consequently, by degrees, every operation of agriculture, and every period of the growth of crops, obtained its presiding and tutelary deity. The goddess, *Terra*, was the guardian of the soil; *Stercius* presided over the manures; *Volusia* guarded the crops whilst evolving their leaves; *Flora* received the still more watchful duty of sheltering their blossom; they passed to the guardianship of *Lactantia* when swelling with milky juices; *Rubigo* protected them from blight; and they successively became the care of *Hostilina*, as they shot into ears; of *Matura* as they ripened; and of *Tutelina* when they were reaped. Such creations of polytheism are fables; but they are errors that should even now give rise to feelings of gratification rather than of contempt. They must please by their elegance; and much more when we reflect that it is the concurrent testimony of anterior nations, through thousands of years, that they detected and acknowledged a Great First Cause.

Unlike the arts of luxury, agriculture has never been subject to any retrograde revolutions; being an occupation necessary for the existence of mankind in any degree of comfort, it has always continued to receive their first attention; and no succeeding age has been more imperfect, but in general more expert, in the art than that which has preceded it. The Greeks are not an exception to this rule; for their agriculture appears to have been much the same in the earliest brief notices we have of them, as it was with the nation of which they were an offsett; The early Grecians, like all new nations, were divided into but two classes: landed proprietors, and *Helots*, or slaves; and the estates of the former were little larger than were sufficient to supply their respective households with necessaries. We read of princes among them; and as we dwell upon the splendid details of the Trojan war, associate with such titles, unreflectingly, all the pageantry and luxury of modern potentates that are distinguished by similar titles. But in this we are decidedly wrong; for there was probably not a leader of the Greeks who did not, like the father of Ulysses, assist with his own hands in the farming operations.—(*Homer's Odys., 1, xxiv.*) Hesiod is the earliest writer who gives us

* From Johnson's Farmer's Encyclopedia.

any detail of the Grecian agriculture. He appears to have been the contemporary of Homer, and, in that case, to have flourished about nine centuries before the Christian era. His practical statements, however, are very meager; we have, therefore, preferred taking Xenophon's *Economics* as our text, and introducing the statements of other authors, as they may occur, to supply deficiencies or to afford illustrations.

Xenophon died at the age of ninety, 359 years before the birth of Christ. The following narrative of the Greek agriculture is from his "Essay," if not otherwise specified.

In Xenophon's time the landed proprietor no longer labored upon his farm, but had a steward as a general superindendant, and numerous laborers, yet he always advises the master to attend to his own affairs. "My servant," he says, "leads my horse into the fields, and I walk thither for the sake of exercise in a purer air; and when arrived where my workmen are planting trees, tilling the ground, and the like, I observe how everything is performed, and study whether any of these operations may be improved." After his ride, his servant took his horse, and led him home, "taking with him," he adds, "to my house such things as are wanted, and I walk home, wash my hands, and dine off whatever is prepared for me moderately." "No man," he says, "can be a farmer, till he is taught by experience; observation and instruction may do much, but practice teaches many particulars which no master would ever have thought to remark upon." "Before we commence the cultivation of the soil," he observes, that, "we should notice what crops flourish best upon it; and we may even learn from the weeds it produces what it will best support."

"Following, or frequent ploughing in spring or summer," he observes, "is of great advantage;" and Hesiod advises the farmer (*Works and Days*, 50) always to be provided with a spare plough, that no accident may interrupt the operation. The same author directs the ploughman to be very careful in his work. "Let him," he says, "attend to his employment, and trace the furrows carefully in straight lines, not looking around him, having his mind intent upon what he is doing."—*Ibid.* 441—443.

Theophrastus evidently thought that the soil could not be ploughed and stirred about too much, or unseasonably; for the object is to let the earth feel the cold of winter and the sun of summer, to invert the soil, and render it free, light, and clear of all weeds, so that it can most easily afford nourishment.—(*De Causis Plant.* lib. iii. cap. 2, 6.)

Xenophon recommends green plants to be ploughed in, and even crops to be raised for the purpose; "for such," he says, "enrich the soil as much as dung." He also recommends earth that has been long under water to be put upon land to enrich it, upon a scientific principle which we shall explain under IRRIGATION. Theophrastus, who flourished in the fourth century B. C., is still more particular upon the subject of *Manures*. He states his conviction that a proper mixture of soils, as clay with sand, and the contrary, would produce crops as luxuriant as could be effected by the agency of manures. He describes the properties that render dungs beneficial to vegetation, and dwells upon composts.—(*Hist. of Plants*, ii. cap. 8.) Xenophon recommends the stubble at reaping time to be left long, if the straw is abundant, "and this, if burned, will enrich the soil very much, or it may be cut and mixed with dung." "The time of sowing," says Xenophon, "must be regulated by the season; and it is best to allow seed enough."

Weeds were carefully eradicated from among their crops; "for, besides the hindrance they are to corn, or other profitable plants, they keep the ground from receiving the benefit of a free exposure to the sun and air." Homer describes Laertes as *hoeing*, when found by his son Ulysses.—(*Odys. xxiv. 226.*)

Water-courses and ditches were made to drain away "the wet which is apt to do great damage to corn."

Homer describes the mode of *threshing* corn by the tramping of oxen (*Iliad*, xx. lin. 495, &c.); and to get the grain clear from the straw, Xenophon observes, "the men who have the care of the work take care to shake up the straw as they see occasion, flinging into the way of the cattle's feet such corn as they observe to remain in the straw." From Theophrastus and Xenophon combined, we can also very particularly make out that the Greeks separated the grain from the chaff by throwing it with a shovel against the wind.

III. THE AGRICULTURE OF THE ROMANS.—It is certain, that at a very early

age Italy received colonies from the Pelasgi and Arcadians; and that, consequently, with them the arts of Greece were introduced; and we may conclude that there was then a similarity in the practice of agriculture in the two countries.

About 753 years before the nativity of Christ, Romulus founded the city of Rome, whose inhabitants were destined to be the conquerors and the improvers of Europe. The Roman eagle was triumphant in Egypt, Persia, Greece, Carthage, and Macedon; and the warriors who bore it on to victory, in those and other countries, being all possessors of land of a larger or smaller extent, naturally introduced, upon their return, any superior vegetable or improved mode of culture, which they observed in those highly civilized seats of their victories.

Thus the arts of Rome arrived at a degree of superiority that was the result of the accumulated improvements of other nations; and, finally, when Rome became in turn the conquered, the victors became acquainted with this accumulated knowledge and diffused it over the other parts of Europe.

Of the agriculture of the early Romans we know but little; but of its state during the period of their greatest prosperity and improvement we, fortunately, have very full information. Cato in the second, and Varro in the first century before the Christian era, Virgil, at the period of that event, Columella and Pliny but few years subsequently, and Palladius in the second or fourth century, each wrote a work upon agriculture, which, with the exception of that by Columella, have come down to us entire.

From these various authorities we derive full information; and we are convinced that many of our readers will be surprised at the correct knowledge of the arts of cultivation possessed by that great nation.

1. Size of the Roman Farms.—When Romulus first partitioned the lands of the infant State among his followers, he assigned to no one more than he could cultivate. This was a space of only two acres.—(*Varro*, i, 10; *Pliny*, xvii, 11.) Cincinnatus, Curius Dentatus, Fabricius, Regulus, and others distinguished as the most deserving of the Romans, had no larger estates than this. Cincinnatus, according to some authorities, possessed only four acres.—(*Ibid.*; *Columella*, i, 3, &c.) On these limited spaces they dwelt, and cultivated them with their own hands. It was from the plough that Cincinnatus was summoned to be dictator, (*Livy*, iii, 26;) and the Samnian ambassadors found Curius Dentatus cooking his own repast of vegetables in an earthen vessel.—(*Plutarch, in vita Cato. Cens.*)

Some of the noblest families in Rome derived their patronymic names from ancestors designated after some vegetable, in the cultivation of which they excelled, as in the examples of the Fabii, Pisones, Lentuli, Cicerones, and the like.—(*Pliny* xvii, 1.) In those days, "when they praised a good man, they called him an agriculturist and a good husbandman; he was thought to be very greatly honored who was thus praised."—(*Cato, in Pref.*) As the limits of the empire extended, and its wealth increased, the estates of the Roman proprietors became very greatly enlarged; and, as we shall see more particularly mentioned in our historical notices of gardening, attained a value of 80,000*l.*—(*Plutarch, in vit. Marius et Lucullus.*) Such extensive proprietors let portions of their estates to other citizens, who, if they paid for them a certain rent, like our modern tenants, were called *Coloni*, (*Columella*, i, 7; *Pliny, Epist.*, x, 24,) and *Politores*, or *Partiarii*, if they shared the produce in stated proportions with the proprietor.—(*Pliny, Epist.*, vii, 30, and ix, 37, &c.) Leases were occasionally granted, which appear to have been of longer duration than five years.—(*Ibid.*, ix, 37.)

2. Distinction of Soils.—Soils were characterized by six different qualities, and were described as rich or poor, free or stiff, wet or dry.—(*Colum.*, ii, 2.)

The best soil they thought had a blackish color, was glutinous when wet, and friable when dry; exhaled an agreeable smell when ploughed, imbibed water readily, retaining a sufficiency and discharging what was superfluous; not injurious to the plough-irons by causing a salt rust; frequented by crows and rooks at the time of ploughing; and, when at rest, speedily covered with a rich turf.—(*Virg. Georg.*, ii, 203, 217, 238, 348; *Pliny*, xvii, 5.)

Vines required a light soil, and *corn* a heavy, deep, and rich one.—(*Virg. Georg.*, ii, 29; *Cato*, vi.)

3. Manures.—The dung of animals was particularly esteemed by the Romans for enriching their soil. "Study," says Cato, "to have a large dunghill."—(*Cato*, v.) They assiduously collected it and stored it in covered pits, so as to check the escape of the drainage.—(*Colum.*, i, 6; *Pliny*, xvii, 9, and xxiv, 19.)

They sowed pulverized pigeons' dung and the like over their crops, and mixed it with the surface soil by means of the sngle or hoe.—(*Colum.*, i, 16; *Cato*, xxxvi.) They were aware of the benefit of mixing together earth of opposite qualities, (*Ibid.*) and of sowing lupines and ploughing them in while green.—*Varro*, i, 23.) They burnt the stubble upon the ground, and even collected shrubs, and the like, for the similar purpose of enriching the soil with their ashes.—(*Virg. Georg.*, i, 84; *Pliny*, xvii, 6, 25.)

Pliny also mentions that lime was employed as a fertilizer in Gaul, and marl in the same country and Britain; but we can only surmise, hence, that they were also probably employed by the Romans.—(*Pliny*, xvii, 8, and xvii, 5.)

4. *Draining*.—The superfluous water of soils was carried off by means both of open and covered drains.—(*Colum.*, ii, 2, 8; *Pliny*, xvii, c.; *Virg. Georg.*, i, 109.) Cato is very particular in his directions for making them.—(*Cato*, xlvi, clx.)

5. *Crops*.—They cultivated wheat, spelt, barley, oats, flax, beans, peas, lupines, kidney-beans, lentils, tares, sesame, turnips, vines, olives, willows, and the like. To cite the authorities who mention each of these would be needless, for they are noticed by all the Roman writers upon agriculture. Of the relative importance or proportion in which the crops were profitable to the Romans we have this judgment of Cato: “If you can buy 100 acres of land in a very good situation, the vineyard is the first object if it yields much wine; in the second place, a well watered garden; in the third, a willow plantation; in the fourth, an olive ground; in the fifth, a meadow; in the sixth, corn ground; in the seventh, an under-wood, a plantation yielding stout poles for training the vine; and in the ninth, a wood where mast grows.”—(*Cato*, i, 1.)

They made hay, and the process appears to have been the same as in modern times. After being cut it was turned with forks, piled into conical heaps, and finally into stacks or under cover. But the mowing was imperfectly performed; for, as soon as the hay was removed from the field, the mowers had to go over it again.—(*Varro*; *Colum.*, ii, 22.)

6. *Implements*.—The plough consisted of several parts: the beam, to which the yoke of the oxen was fastened; the tail or handle terminated in a cross-bar, with which the ploughman guided the instrument; it had a ploughshare, the share-beam to which it was fixed, and two mould-boards, a coulter, and a ploughstaff for cleaning the ploughshare.—(*Ovid. Pont.*, i, 8, 57; *Virg. G.*, i, 170; *Pliny*, xvii, 18, 19.) Some of their ploughs had wheels, and some were without coulters and earthboards. Besides this they had spades, rakes, hoes, with plain and with forked blades, harrows, mattocks, and similar implements.

7. *Operations*.—Ploughing was usually performed by two oxen, though three were sometimes employed. They were yoked abreast, and trained when young to the employment.—(*Cicero*, in *Verr.*, iii, 21; *Col.*, vi, 10; *Pliny*, xviii, 18; *Virg. G.*, iii, 163, &c.) They were usually yoked by the neck, but sometimes by the horns. (*Pliny*, viii, 45; *Colum.*, ii, 2.) There was but one man to a plough, which he guided, and managed the oxen with a goad.—(*Pliny. Epist.*, viii, 17.)

They sometimes ploughed in ridges and sometimes not. They did not take a circuit when they came to the end of the field, as is our practice, but returned close to the furrow. They were very particular in drawing straight and equal sized furrows.—(*Pliny*, xviii, 19, s. 49.)

They seem to have ploughed three times, always before they sowed, (*Varro*, i, 29;) and to stiff soils even as many as nine ploughings were given.—(*Virg. G.*, i, 47; *Pliny*, xviii, 20; *Pliny. Epist.*, v, 6.) The furrows in the first ploughing were usually nine inches deep. When the soil was only stirred about three inches it was called *scarification*.—(*Pliny*, xviii, 17—19.) They usually fallowed their land every other year.—(*Virg. G.*, i, 71.)

Sowing was performed by hand from a basket; and that it might be performed regularly the hand moved with the steps.—(*Colum.*, ii, 9; *Pliny*, xviii, 24.) The seed was either scattered upon the land and covered by means of rakes and harrows, or more commonly by sowing it upon a plain surface and covering by a shallow ploughing, which caused it to come up in rows, and facilitated the operation of hoeing.—(*Pliny*, xviii, 20.) They were particular as to the time of sowing, the choice of seeds, and the quantity sown.—(*Varro*, i, 44; *Pliny*, xviii, 24, s. 55; *Virg. G.*, i, 193, &c.)

Weeding was performed by hoes, hooks, and by hand.

In dry seasons the crops were watered.—(*Virg. G.*, i, 106.) If they appeared too luxuriant they were fed off.—(*Ibid.* 193.)

Reaping and mowing were the usual modes of cutting down the corn crops, but the ears were sometimes taken off by a toothed machine called *batilium*, which seems to have been a wheeled cart pushed by oxen through the corn, and catching the ears of corn between a row of teeth fixed to it upon the principle of the modern daisy rake. In Gaul the corn was cut down by a machine, drawn by two horses.—(*Varro*, i, 50; *Virg. G.*, i, 317; *Colum.*, ii, 21; *Pliny*, xviii, 30.) They do not seem to have ever bound their corn into sheaves.—(*Colum.*)

Threshing was performed by the trampling of oxen and horses, by flails, and by means of sledges drawn over the corn.—(*Pliny*, xvii, 30; *Colum.*, i, 6; *Virg. G.*, iii, 132; *Tibullus*, i, 5, 22; *Varro*, i, 52.) The threshing-floor was circular, placed near the house, on high ground, and exposed on all sides to the winds. It was highest in the centre and paved with stones, or more usually with clay, mixed with the lees of the oil, and very carefully consolidated.—(*Colum.*, i, 6; *Varro*, i, 2; *Virg. G.*, i, 178; *Cato*, xci and cxxix.)

Dressing was performed by means of a sieve or van, and by a shovel, with which it was thrown up and exposed to the wind.—(*Varro*, i, 52; *Colum.*, ii, 21.) It was finally stowed in granaries or in pits, where it would keep fifty years.—(*Pliny*, xviii, 30; *Varro*, i, 57.)

8. *Animals.*—Oxen, horses, asses, mules, sheep, goats, swine, hens, pigeons, pea-fowls, pheasants, geese, ducks, swans, guinea-fowls, and bees, are mentioned by various authors as products of the Roman farms. Directions for breeding many of these are given in the third and fourth books of the *Georgics*.

Such is an outline of the Roman agriculture; and in it our readers will doubtless find sufficient evidence to warrant them in agreeing with us that it was but little different from that pursued by the present farmers of England. We are superior to them in our implements, and consequently in the facility of performing the operation of tillage; we, perhaps, have superior varieties of corn, but we most excel them in our rotation of crops and in the management of stock. We differ from them, also, in not practising the superstitious rites and sacrifices which accompanied almost all their operations, (see *Cato*, cxxxvi, c.) but of the fundamental practices of agriculture they were as fully aware as ourselves. No modern writer could lay down more correct and comprehensive axioms than *Cato* did in the following words; and whoever strictly obeys them will never be ranked among the ignorant of the art. “What is good tillage?” says this oldest of the Roman teachers of agriculture; “to plough. What is the second? to plough. The third is to manure. The other part of tillage is to sow plentifully, to choose your seed cautiously, and to remove as many weeds as possible in the season.”—(*Cato*, lxi.)

Such is an epitome of their agricultural knowledge; a knowledge which has since increased and can only in future be added to by attending to this advice of another of their writers: “Nature,” he observes, “has shown to us two paths which lead to a knowledge of agriculture—experience and imitation. Preceding husbandmen, by making experiments, have established many maxims; their posterity generally imitate them; but we ought not only to imitate others but make experiments, not directed by chance, but by reason.”—(*Varro*, i, 18.)

HORTICULTURE FOR THE SOUTH.

BY T. AFFLECK, OF MISSISSIPPI.

DEAR SIR: In common with your many readers, I have had much pleasure in perusing the very interesting and valuable articles on “Fruit-growing in the South,” by *Rusticus*. The information they contain was just of the kind we most needed.

As your “City of the Bluffs” seems to have become greatly alive to improvement of late years, and many neat and home-like houses have been erected in and around the city, a few hints on planting ornamental trees and shrubs, with short descriptions of some of the less common and rarer sorts, may be apropos and useful.

We lack variety, as a general thing, in this class of trees and plants. In a climate in which a greater number of rare and extremely beautiful evergreens are

perfectly hardy than in any other I know of—unless perhaps the Isle of Wight off the south coast of England, and doubtful if even there, we confine ourselves to some half dozen kinds. Nothing can be more beautiful than the Laurier Amandier, (*Cerasus Caroliniensis*), Cape Jessamine, Arbor Vitæ, some of the Viburnums, Pittosporums, Euonymus, and Myrtles; yet there is a sameness in our lawns and door-yards, from the general and almost exclusive use of these, that might readily be relieved by the addition of some of the many others which are equally, and, in some instances, more beautiful.

So with our shade trees. The perpetually recurring Pride of China tree, beautiful though it be, to the exclusion of the scores of magnificent trees, native and introduced, is, to say the least of it, in very bad taste. It is a filthy tree, too, about a yard, when compared with many others.

As a shade and ornamental tree, there is none will compare with our magnificent Water oak and Live oak. The latter is the more beautiful and permanent, the former is of more rapid growth. Suppose that, instead of the China tree, your streets and pleasant bluff promenade had been lined and shaded with these oaks! By this time you would have had ornamental trees such as few cities can boast of. The Mobilians were alive to the beauty of the Live oak as a shade tree for their streets and squares, and see the result now!

The Cork oak, (*Quercus suber*), the Holly-leaved and the Cut-leaved Turkey-oak are all very beautiful, though yet somewhat rare. I have fine young trees of all of them.

The Imperial Paulownia, with its immense leaves, and numberless spikes of blue bell-like blossoms, has been introduced some ten or a dozen years, and is quite an acquisition. It blooms here abundantly, both spring and fall.

The Varnish tree (*Sterculia platynifolia*) is so called from its beautiful glossy bark, and large rich colored leaves, which seem all to have been recently coated with green varnish. It is, altogether, a pretty and desirable ornamental shade tree.

The Croton tree, and Everblooming China are both pretty trees, though, in a severe winter, the ends of the branches are sometimes killed by the frost.

The *Acacia julibrissin*, or flowering Acacia, though by no means rare, is yet too showy, with its myriads of pink and yellow flowers, to be omitted in pleasure grounds, or even small yards.

Several of the Maples are natives here, and form, as elsewhere, most beautiful trees. Perhaps the best of these is the Scarlet Maple, so showy in the spring, with its bunches of bright scarlet blossoms. The ash-leaved Maple (*Nigundo*) or Box Elder, cannot be excelled as a shade tree in any country, where it has room to grow and spread. Several of the European Maples do well here, and are desirable trees.

The Chestnut is one of the most stately trees of the forest, and desirable not only as a lawn tree, but for its fruit. The large fruited Spanish is the finest.

Our Great Southern Cypress (*Taxodium*) should never be omitted, where the soil is rich and moist. The chief cause of its rarity in lawns, &c., is the difficulty of transplanting young trees from the swamp to the dry upland of our hills. With trees grown on dry land from seed, there is no such difficulty.

The graceful weeping willow, though so easily grown, is comparatively rare. The curled-leaved variety, being quite as weeping in its habit as the other, is very curious. Each leaf is curled up like a cork-screw.

The Ginko (*Salisburia*) or Maiden-hair tree is pretty, and quite ornamental. The leaves are very curious.

The Double-flowering Peach is one of the most showy of trees, forming early in the spring a mass of wreaths of rich and extremely double rose-like blossoms.

Where there is room for a few large and wide-spreading trees, the pecan should not be overlooked. They afford a fine shade, and come into bearing in eight or ten years. We know of one gentleman in western Texas, who has some fifteen or twenty varieties of this delicious nut, which he has succeeded in multiplying by grafting. Two years ago, he sent the writer a quantity of nuts from each of eight or ten of the finest of his selections. These were planted, and have produced a fine lot of trees; the trees from each variety of nut show a wonderful family likeness, in foliage, habit of growth, &c.; whilst there is a marked difference between the lots. They have been all twice transplanted, and root-pruned each time; thus in a great measure obviating the difficulty in transplanting when the trees are older.

The mountain ash, or *Rowan tree*, dear to every Scotchman's boyish recollections, we have succeeded in acclimating. It is a beautiful tree.

The large-leaved magnolia, (*M. macrophylla*), from that same difficulty of transplanting from the woods, is quite rare in our gardens; where its magnificent foliage and immensely large and showy flowers fully entitle it to a first place. When grown from seed in the nursery row, there is no difficulty in removing it.

Of evergreen shade trees, the *Magnolia grandiflora* stands first. Like its companion, the *holly*, it is not easily removed from the woods. When quite young this may be effected, by lifting with a ball of earth around the roots, in the spring, and cutting off the leaves, but leaving the leaf-stalks. They well deserve that every available means should be used to secure both—the magnolia and the holly (*Ilex opaca*)—wherever shade and ornament are sought for. During the first three or four years from the seed their growth is quite slow, but afterwards they push up rapidly, and soon form handsome trees.

There is another holly, a native of the south and an evergreen, that is very generally overlooked. It is more commonly planted about Mobile than anywhere else. This is the *Ilex vomitoria*. The growth is slender, leaves small and numerous, and in winter the plant is covered with bright scarlet berries.

Of the various *Conifera*, it is rare to find a plant in a lawn in all this region; unless, perhaps, an occasional long-leaved or old-field pine—both most noble and beautiful trees, and not planted one for a thousand that should be. There are many other pines, from all parts of the world, now to be found in the nurseries, and all desirable.

The spruces are the most prized of this family in Europe, although so common, that they are planted by the thousand to serve as screens to lawns and gardens, and to plantations of other less hardy trees. The Norway spruce, (*Abies excelsa*), the most common, is also the most beautiful. In fact, I knew of no tree that equals it in gorgeous and impressive beauty. Some ten years ago, I imported a lot of fine plants of this and other spruces; and, as in every other attempt to import young evergreens either from the north or Europe, I saved but a very small percentage. Of those saved were two Norway spruces. For five years they did not make a growth of more than an inch each year! After that they shot up rapidly and are now beautiful, healthy plants, eight or ten feet in height. Since then I have been more successful in habituating young plants to the climate, and have fine young trees of several species of spruce.

The cedars are very beautiful. And, by the way, what we know as the *Red Cedar*, is a *Juniper*, bearing a small purple berry; the cedars are cone-bearing. *Cedrus deodara*, the great Indian cedar, is the most splendid tree of this family; perfectly hardy here and of very rapid growth.

Two new evergreen conifers, *Cryptomeria Japonica* and *Cunninghamii Sinensis*—the former from Japan, the latter from China—I look upon as great acquisitions. Both are at home in our climate; requiring, however, like all of these resinous evergreens, a light and sandy, but rich soil; and are most graceful and beautiful, yet curious ornaments to the lawn or door-yard.

Another of these, the great Chili pine, (*Arancaria imbricata*), has not succeeded so well; though I have now a few young seedlings that seem to feel themselves at home.

[To be continued.]

NEW METHOD OF RAISING FRUIT TREES.

The Patent Office is in receipt of information from England in regard to raising fruit in what are termed orchard houses, by planting small trees in pots. The writer says that a few old sashes, some posts and weatherbording, are all that is necessary to constitute a house for trying the experiment. Some experiments were made last year under the management of Mr. Gordon, in the rose-house in the garden of the Horticultural Society, London. A variety of young dwarf fruit trees were placed in pots from twelve to fourteen inches in diameter, and as many as the house would hold were collected in it. This house is spanroofed, between fifty and sixty feet long, has half its sashes sliding down and the others fixed. There is additional ventilation through the doors, which fall down in the wooden sides, but there is no artificial heat. The success attending this experiment was highly satisfactory. The fruit was abundant, highly flavored, and of a superior quality, among which are classed strawberries, gooseberries, raspberries, currants, apricots, peaches, nectarines, plums, pears, figs, grapes, &c.

COTTON CROP.

The crop of cotton for the year ending September 1, 1855, was, as our readers know, less than that of the previous year; but it appears that the influences of war and dear food have caused it to sell at less rates. The aggregates are as follows:

| Year. | Crop. | Export. | | | Per pound. |
|---------------|-----------|-----------|---------------|--------------|------------|
| | | Bales. | Bales. | Pounds. | |
| 1854..... | 3,262,882 | 2,252,381 | 987,833,106 | \$93,596,220 | 9.47 |
| 1855..... | 2,847,339 | 2,303,403 | 1,008,424,601 | 88,143,844 | 8.74 |
| Decrease .. | 415,543 | ..... | ..... | 5,452,376 | 73 |
| Increase..... | ..... | 50,522 | 2,059,145 | ..... | ..... |

A larger proportion of the crop was exported out of the country, and at an average of $\frac{3}{4}$ cent per pound less money. The destination of the crop was as follows:

| Countries. | 1855. | | 1854. |
|----------------------------|-----------|--------------|--------------|
| | Bales. | Value. | Value. |
| Great Britain..... | 1,533,142 | \$57,616,749 | \$64,736,401 |
| France..... | 470,293 | 19,035,423 | 14,532,712 |
| Spain..... | 82,198 | 3,320,034 | 3,683,246 |
| Bremen..... | 51,648 | 2,020,438 | 2,232,222 |
| Sardinia..... | 33,536 | 1,288,387 | 147,462 |
| Belgium..... | 28,838 | 1,042,437 | 1,342,962 |
| Lombardy..... | 18,831 | 751,632 | 991,451 |
| Hamburg..... | 18,672 | 761,572 | 1,304,138 |
| Sweden..... | 19,363 | 744,228 | 898,926 |
| Mexico..... | 25,917 | 744,509 | 1,245,294 |
| Holland..... | 11,243 | 418,438 | 567,482 |
| Naples..... | 2,830 | 109,724 | 31,631 |
| Austria proper..... | 1,939 | 85,052 | 1,370,402 |
| British North America..... | 2,053 | 87,006 | 415 |
| Russia..... | 1,025 | 48,647 | 301,293 |
| Other points..... | 1,884 | 72,393 | ..... |
| Total..... | 2,303,403 | 88,143,814 | 93,596,220 |

The decline is pretty general, but more particularly to Sardinia and to Russia. These may have been, to some extent, affected by the war. As a general result, however, the south has given 2,059,145 pounds more cotton, and got \$5,452,376 less money than for the preceding year. That item, coming out of what should be net profits, in a year when food has been very dear, has formed a very material difference in the available assets of the planters. This year they are said, however, to be far better provided than usual with edible crops, in proportion to cotton raised.

OUR COTTON TRADE.

The following is an official statement of the exports of cotton from the United States for the year ending June 30:

Cotton export—in weight.

| | Treasury year, 1855. | Treasury year, 1854. |
|----------------------|-------------------------|-------------------------|
| Gulf and Upland..... | 995,366,011 | 977,346,683 |
| Sea Island..... | 13,058,590 | 10,486,423 |
| Total pounds..... | 1,008,424,601 | 987,833,106 |

Cotton export—in value.

| Year. | Total value. | Average per pound. |
|---------------|--------------|-----------------------|
| 1855..... | \$88,142,844 | 8.74 |
| 1854..... | 93,596,220 | 9.47 |
| Decrease..... | 5,452,476 | .73 |

The distribution of the late crop to foreign States is registered as follows:

| Countries. | Bales. | Value. |
|----------------------------|-----------|--------------|
| Great Britain..... | 1,533,133 | \$57,616,749 |
| France..... | 470,293 | 19,035,423 |
| Spain..... | 82,198 | 3,320,134 |
| Bremen..... | 51,648 | 2,020,438 |
| Sardinia..... | 33,536 | 1,288,387 |
| Belgium..... | 28,838 | 1,042,437 |
| Lombardy..... | 18,831 | 751,622 |
| Hamburg..... | 18,672 | 761,572 |
| Sweden..... | 19,363 | 741,278 |
| Mexico..... | 25,917 | 744,519 |
| Holland..... | 11,243 | 418,433 |
| Naples..... | 2,830 | 109,722 |
| Austria proper..... | 1,939 | 35,054 |
| British North America..... | 2,053 | 87,006 |
| Russia..... | 1,025 | 48,647 |
| Other points..... | 1,884 | 72,393 |
| Total..... | 2,303,403 | 88,143,814 |

The total crop of the United States, and the export in bales, reckoned at 437½ pounds each, were:

| Year. | Crop in bales. | Export in bales. | Export in value. |
|-----------|----------------|------------------|------------------|
| 1855..... | 2,847,539 | 2,303,403 | \$88,143,814 |
| 1854..... | 3,262,882 | 2,257,881 | 93,596,220 |

THE OHIO GRAPE VINTAGE FOR 1855.*

CINCINNATI, OCTOBER, 1855.

Having conferred with some of the most successful grape growers of this region, I hasten to give you the results of my inquiries. Cincinnati is the centre of the wine region in the Ohio valley, and the Ohio river has not inaptly been called the "Rhine of America"—a name, which in after years, it may fully deserve. The "vine-clad hills" already afford a pleasing variety in the scenery around this city, and the vintage is anticipated with interest and solicitude. It is a new feature in the harvest of this rich valley, and a product that must before long form an important branch of our national industry.

This has been a bad year for the grape. Owing to the unusually wet season most of the vineyards suffered seriously from the "mildew" and the "rot." Some few escaped these diseases and produced crops of four to six hundred gallons to the acre; but the general average for the whole county will scarcely exceed 150 gallons per acre. Mr. Robert Buchanan's large vineyard of six acres produced 1,200 gallons. In the year 1853, which was the most favorable for the grape crop experienced for a long period, the yield averaged about six hundred gallons per acre on the best cultivated vineyards, and a few produced 800 to 900 gallons. Mr. Buchanan in that year obtained from five acres 4,236 gallons, or 847 per acre.

The quality of the wine made this year will be very good. The usual price of the juice from the press is 75 cents to \$1 per gallon, according to quality; after the first and second fermentation \$1 to \$1 50 per gallon. Within twenty miles around Cincinnati some fifteen hundred acres are planted with the vine, of which about one thousand acres are now in bearing, and may probably produce 150,000 gallons of wine the present season. This is about a two-third crop for the Ohio valley. The growth of the wine business is shown by the fact that in 1845 there were three hundred and fifty acres of vines in the neighborhood of Cincinnati, and in the year 1852 about twelve hundred. The value of the sparkling wine produced in 1851 was estimated at \$175,000. In Missouri and Illinois about eleven hundred acres are already planted, and the culture is rapidly increasing through the west and southwest. Tennessee and Georgia are particularly well adapted to the growth of the Catawba grape. The Catawba is our great wine grape, and is without a rival. It was found in the famous county of Buncombe, North Carolina, in the year 1802, by Col. Murray, and brought into notice as a wine grape by Major Adlum, of Georgetown, D. C., about the year 1820, and by Mr. Longworth at Cincinnati in 1825. Nearly all our vineyards are planted with this grape, which, with careful attention, produces a wine fairly comparing with the best average Rhenish and French sparkling and still wines.

In Cincinnati about 200,000 bottles of sparkling Catawba and 300,000 bottles of still wine are put up annually. Of the Isabella, Schuylkill, and Herbemont grape a small quantity of wine is made every year, and the wine from the last named is growing into favor with many from its resemblance to the Spanish Manzanilla. Of late years the interest of the producer has been greatly advanced by the construction of wine cellars or large subterranean vaults in Cincinnati, and the establishment of regular wine-houses conducted by dealers of ample capital, and which serve to ensure a ready market for the product of the vineyards. The wine is kept in bottles well corked and sealed, and laid on their sides. The vines in our vineyards are set in rows, generally three by six feet apart, and trained to single stakes six or seven feet high. The grape bears its fruit on the wood of the preceding year's growth; hence two long canes as branches are always left to produce the next year's crop. These canes are cut down, one to a spur of two points, and another is left with eight or ten joints, and bent round in the form of a bow, and fastened to the stake with a willow twig or tie. The bearing shoots in summer are shortened in and the vine kept clear of superfluous wood, so as to admit sun and air to ripen the grapes. The ground is hoed or ploughed in May and kept free from weeds in summer, and the vines neatly tied to the stakes and trained from one to the other as the growth increases. The process is simple and easily understood. When ripe, in October, the imperfect and unripe berries are picked from the bunches of grapes and the perfect bunches passed through wooded rollers, or bruised in a tub with a beetle, mashing the

* From the Journal of Commerce.

skins and pulp, but *not* the seeds. The mashed grapes are then thrown into a press resembling a cider press, and the juice extracted. The juice, or must, is put into a clean cask, and the fermentation, which immediately commences, ceases in about a week. A second fermentation takes place in May following, after which the wine may be bottled, when clear. It is usually racked off from the lees in December or January, and before the second fermentation. From the lees and the pumice an excellent and high flavored brandy is made, which is now attracting considerable attention.

The demand for Catawba wine exceeds the supply, and the quality is constantly improved, both by the cultivators and those who prepare it for market. As regards the vine-culture, the future is full of promise.

THE CULTIVATION OF THE OLIVE IN THE UNITED STATES.

Mr. Robert Chisholm, of Beaufort, South Carolina, in answer to the inquiries of the Commissioner of Patents, gives a highly-interesting account of his experience in the cultivation of the olive. Mr. C. obtained his trees from the neighborhood of Florence, early in 1833. They were of two kinds—the small, round olive, esteemed the best for oil, and a much larger and more oval variety, upon which the first named was grafted. The winter of 1835, he states, was an exceedingly cold one, and killed to the roots all of the orange trees in the southern States, but did not in the least injure these olive trees. The trees at first did not improve rapidly, for want of cultivation. In order to remedy this, and at the same time pay expenses, sweet potatoes and field cow-peas were planted among them. This was found to succeed admirably; the trees grew rapidly, and soon began to bear fruit, which they have continued to do every year.

Mr. C. can now boast that he has made oil from the olive, but does not think that it is sufficiently remunerative to be prosecuted as yet, and so confines himself to pickling the fruit. His pickled olives are pronounced, by competent judges, superior to those imported from France. He adds that very few imported olives can now be sold in that section of country.

STATE AID FOR AGRICULTURE.

We perceive, says the Soil of the South, from our Mississippi exchanges, that our agricultural friends in that State are circulating a memorial praying the next legislature to add a scientific agricultural department to the State University. We applaud the movement, and would like to see it imitated in Georgia and Alabama. Both these States are filled with projects for State aid to railroads; and while we have no quarrel, nor do we intend to make any, with our public spirited internal improvement men, we claim that agriculture is just as much entitled to public favor. The whole railroad system, nay, the prosperity of the State itself, depends upon the agriculture of the country, and no surer step can be taken towards building a permanent and healthful national prosperity than by fostering the agricultural interests. Make our fields productive, reclaim our old fields, settle our population—do all this by improving our system of agriculture, and we will build the railroads. We know the value of railroads to agriculture, however, and repeat that we make no war upon them. We only insist that a *paramount* interest shall not be overshadowed by them. Alabama has done something in appointing a State geologist, whose labors during this year have been profitably expended in various parts of the State; but Georgia has not even done this much. One of her worthy sons, recently deceased, whose munificence has made his name as immortal as his State's, has handsomely endowed an agricultural professorship in the State University; but what has the State done? To her shame be it said, absolutely nothing. Our legislative halls are filled with planters; probably a majority of our law-makers belong to that profession, and yet they will meet and pass laws by the wholesale, and not one word is said about the great agricultural interests of the State. It is time this unnatural state of things should cease. If money is to be appropriated from the State treasury for any other purpose than to meet the necessary expenses of the government, we insist that the first appropriation *belongs* to agriculture. The legislatures of both States are shortly to assemble, and we trust that they will distinguish themselves by refusing to follow in the footsteps of their illustrious predecessors.

IMPROVEMENTS AT THE SOUTH.

We extract the following from the editorial columns of the *Montgomery (Ala.) Times*. We have been cheered by the same indications of improvement to which the *Times* alludes. An intelligent, permanent, rural population is the grand desideratum of southern civilization. Give us this, and we shall have accomplished more for southern agriculture, more for social happiness, more towards vindicating our peculiar institutions, more for the substantial prosperity of the country, than all the railroads which now traverse the land. We are happy to see that we are moving in that direction.

"WE ARE IMPROVING.—Recent visits to several counties of our State have afforded us an opportunity of noticing some signs of improvement. Plantation economy and management seem to be much more thoroughly studied than formerly, and agriculture, both as a matter of taste and science, is evidently engaging a good deal of thoughtful interest. Farm buildings are beginning, in many places, to have some pretensions to neatness and utility. Rude, misshapen piles of logs, without any reference either to safety or security, are being substituted by substantial structures, fit for rural purposes. Fields are better fenced and cleared; and although the country abounds in the miserable eye-sores of dead trees, defacing the landscape and spoiling the impression of the best plantations, yet there appears to be a disposition to remove these ugly ghosts, and make the country something else than a gigantic forest grave-yard. Dwelling-houses show marked progress. The beautiful cottage, with its white-painted surface and green blinds, begins to delight the eye in every direction; and flower gardens, lending an additional charm to the sentiment of home, adorn the scenery of the roadside. Our roads have been greatly improved, and we have been particularly pleased to notice that bridges are not only more numerous, but more securely built. Then, too, there is a spirit of inquiry abroad among the people as to the progress of art and science. We observe much more of a disposition to make experiments in agriculture, and to apply the principles of chemistry to the cultivation of the soil. What has impressed us most favorably of all is the tokens of advancing domestic life. We see the most encouraging signs in this connexion. Our people are not only giving much more attention to the minor acts of living, keeping better houses, and having far more sensible modes of cooking, but they have more books and periodicals than formerly, while in many of their dwellings the cheerful sound of the piano, guitar, or harp, is heard. Next to progress in virtue and religion, we rejoice to witness the increased interest in taste—the culture of the beautiful in the midst of God's works, and the discipline of the soul to the divine harmonies of the universe. Our people are alive to the importance of education. It is their talk at the fireside and on the street. And we cannot doubt that the advancement we are now enjoying is largely attributable to the influence which the educated young manhood and womanhood of Alabama are beginning to exert."

EXPERIMENTS IN AGRICULTURE.

Well conducted experiments are the most reliable sources of agricultural improvement. Indeed, in the present state of those sciences which pertain to agriculture, theories unsustained by experience are to be received with great circumspection. On the other hand, experiments loosely made are arguments neither for nor against a theory, and the spirit which condemns the deductions of science upon the result of single careless experiment, is just as unfriendly to the development of truth as that spirit which embraces too hastily the conclusions of science unwarranted by the test of experience. We are yet but in the dim twilight of agricultural science, and its truths are too faintly ascertained to constitute the mere theory of the professor, a safe guide in the practice of the art; but when the deductions of the laboratory are confirmed by the results of the practical agriculturist, we may safely conclude that a reliable step has been made in the direction of true progress. It is cause of regret that so little effort has been made among us to secure the co-operation of these two sources of improvement in agriculture.

We have remarked that experiment itself is not infallible; indeed, it is often the source of fatal errors. A single swallow does not make a summer, nor does single experiment settle a principle. To be reliable, experiments must be care-

fully and repeatedly made. Two neighboring planters may determine to test the value of guano, for instance, as a fertilizer for cotton. A succeeds and B fails. Neither can safely conclude that he has settled the matter, but they should carefully compare the modes of application and cultivation, the varieties of soil and season, in order, if possible, to determine the causes which produced the difference in their results. The next year the experiment should be repeated with an eye specially to the operation of those causes which had seemingly controlled the previous experiment. And thus, by repeated tests and close observation, a valuable truth may be elicited. And so, two neighbors may differ about the utility of sub-soiling. One sub-soils and succeeds, another sub-soils and fails. There is a reason why the same operation should produce such contradictory results, and that reason should be ascertained. It may be concluded that the cause lies in the difference of the soils, and to test this, two fields of similar soils may be selected the next year, but the results may still be different. It may be accounted for then upon the supposition that the modes of cultivation are different. Another experiment may be made with special reference to this supposed cause, and still the experiments may produce different results. It will not do still to conclude against sub-soiling, because it has succeeded on one place as often as it has failed in another. Finally, after repeated experiments, it may be ascertained that the difference consists in the fact that one field needed under draining while the other did not; and thus, at last, the very important conclusion may be reached, that sub-soiling pays well where the land is dry, but that it is useless if the sub-soil is wet. We mention these cases by way of illustration, and so we might cite experiments in every department of agriculture and rural economy, but these suffice to enforce the idea that experiments must be cautiously conducted to make them reliable.

With but little labor and expense it is in the power of every planter to contribute to the stock of agricultural knowledge by a systematic course of experiment. Think what an impetus would be given to the cause of improvement in agriculture if our journals devoted to that interest were filled with the reports of such experiments. Each would thus contribute to his neighbor, and in turn receive the benefit of the labors of others. The injudicious expenditure of time, money, and labor, which some have made upon experiments in agriculture, have, in some instances, brought ridicule upon the attempts at agricultural improvement; but such failures are neither arguments against improved agriculture nor against experiments for that purpose. They resulted rather from the want of judgment in the experimenter than from any inherent difficulty in the object to be attained. We recommend no extravagant expenditure—none is necessary. In the ordinary management of the farm it is practicable to note carefully the different operations and the results which they produce, and a detailed report of such experiments as these will secure the advantages of which we speak.—*Soil of South.*

ADDRESS OF HON. C. C. CLAY, JR.,

Delivered before the Chunnenuggee Horticultural Society of Alabama.

We make a few extracts from the copy sent us by the author:

It is unfortunate for the interests of the State that her people have been distinguished by sectional appellatives, separated by physical barriers, and alienated by dissociation. In consequence, jealousy, envy, heart-burning, and strife have prevailed where harmony, concord, and cordial co-operation should have existed, and have prevented that thorough political organization which is the chief end of government. Men and societies of men often war with, dislike or distrust each other, because they are strangers. Familiar acquaintance and free intercourse remove their harsh suspicions, unjust prejudices, and unnatural antipathies. Confidence, respect, and friendship are fruits of frequent and intimate associations. All obstacles to social intercourse tend to alienate and embitter men or nations; and hence, an English poet, with no less truth than terseness, has written:

"Lands intersected by a narrow firth,
Abhor each other; mountains interposed
Make enemies of nations, who had else,
Like kindred drops, been mingled into one."

As man's private attachments are increased by enlarging the circle of his acquaintance, so do his public affections grow with extending intercourse. Our love of the society to which we belong is the germ of patriotism and philanthropy. If we would cultivate these ennobling affections, let us remove all barriers to the social and commercial communion of our people; let us exert every power that art and nature afford us to annihilate the time and space which separate them, bring them into nearer neighborhood, and facilitate their free and frequent association; let us open broad avenues of commerce between the extremes of our State; let us organize State and county associations for the development of our physical and moral resources, in which ideas may be interchanged, truth may be ascertained, and labor may be so directed as to ensure it just reward. By such means we will obliterate geographical lines that distinguish different portions of our State; will eradicate sectional feelings that divide and distract her legislative councils; will liberalize the hearts and enlighten the understandings of her people, and teach them to know and feel that they are identified in interest, united in the bonds of a common welfare, and devoted to the same civil destiny.

Among all those designated by way of distinction as planting States, Alabama is foremost in the quantity of her cotton; producing, according to the census report, 23 per cent. of the entire crop of the Union in 1849; while Georgia, which stood next, produced 20 per cent., Mississippi 16, South Carolina 12, and Louisiana 7 per cent. The value of her products, as evinced in her exportations, elevates her still higher in the list of States, and discovers pecuniary prosperity not only surprising, but quite marvelous in so young a commonwealth. According to official returns for the year ending 30th June, 1852, she is excelled in the value of her exports by but two States in the Union, New York and Louisiana. And when we consider the sources whence those States derive a large portion of their exports, it would not be arrogant or extravagant to claim for Alabama precedence over them as an exporter. It is quite sufficient, to prove that she exceeds Louisiana in her products, to state that she has 154,861 more inhabitants, a larger quantity of cultivated land, and more persons engaged in tillage. Besides, she sends, annually, a large number of cotton bales to New Orleans to swell the exports of Louisiana. Indeed, bearing in mind that the productions of about one-seventh of the State (the northern part) go to New Orleans or the Atlantic ports, and a part of the cotton crop of East Alabama to Appalachicola, which together exceed what we receive in Mobile from East Mississippi, it may be safely asserted that the official returns fall below the real aggregate exports of our State. On the other hand, there are all the States north of the Ohio and several of the New England States annually pouring a portion of their treasures into New York, and helping to swell the aggregate of her exports; while that great Paxton of American wealth, the Mississippi river, wafts to New Orleans the annual tributes of a region from which the world might draw subsistence. Hence, I repeat, Alabama may justly assert her right to the first place in the confederacy as an exporter, and may truly triumph over her compeers as most worthy to bear the banner of agriculture, whose emblems are peace, plenty, and power. When, too, we reflect that she is a child in years, but yesterday reclaimed from the Indian, whose foot-prints are still visible in her virgin forests, how marvelous her past progress! How incalculable her future attainments! And yet the plentitude of her riches, the magnitude of her power, and the brightness of her glory are attributable to a single production of her soil—the cotton-plant! The white autumnal mantle, spread over our fields by munificent Nature, exceeds in value the golden fleece, in pursuit of which the Argonauts incurred such miraculous perils, and achieved such prodigies of valor. It is not only a fleece of gold, but serves better than a coat of mail for our defence, being stronger proof against foreign weapons than iron or brass. Like the mysterious cestus of Venus, which lent charms to the most deformed wearer, and enkindled love in all beholders, the snowy cestus, which belts our confederacy, wins for us the admiration and friendship of the world. Gold and jewels, "the types of ignorance and barbaric pomp," are useless, compared with this last great material of national industry and commerce, of human comfort and support. The auriferous shores of Australia or California are not so inviting to enterprise, or so nourishing to trade, or so impulsive to human progress, as this precious product of our soil.

We need not go, for proof, to Georgia or South Carolina, which, for some years, were almost the only cultivators of cotton, and, as late as 1820, grew more

than half of the entire crop of the Union, but now produce only about one-fifth of it. I can show you, with sorrow, in the older portions of Alabama, and in my native county of Madison, the sad memorials of the artless and exhausting culture of cotton. Our small planters, after taking the cream off their lands, unable to restore them by rest, manures, or otherwise, are going further west and south, in search of other virgin lands, which they may and will despoil and impoverish in like manner. Our wealthier planters, with greater means and no more skill, are buying out their poorer neighbors, extending their plantations, and adding to their slave force. The wealthy few, who are able to live on smaller profits and to give their blasted fields some rest, are thus pushing off the many, who are merely independent. Of the twenty millions of dollars annually realized from the sales of the cotton crop of Alabama, nearly all not expended in supporting the producers is reinvested in land and negroes. Thus the white population has decreased and the slave increased almost *pari passu* in several counties of our State. In 1825 Madison county cast about 3,000 votes; now she cannot cast exceeding 2,300. In traversing that county one will discover numerous farm houses, once the abode of industrious and intelligent freemen, now occupied by slaves, or tenantless, deserted, and dilapidated; he will observe fields, once fertile, now unsenced, abandoned, and covered with those evil harbingers, fox-tail and broomsedge; he will see the moss growing on the mouldering walls of once thrifty villages, and will find "one only master grasps the whole domain" that once furnished happy homes for a dozen white families. Indeed, a country in its infancy, where, fifty years ago, scarce a forest tree had been felled by the axe of the pioneer, is already exhibiting the painful signs of senility and decay, apparent in Virginia and the Carolinas; the freshness of its agricultural glory is gone, the vigor of its youth is extinct, and the spirit of desolation seems brooding over it. The prospect is calculated to fill the patriot's heart with painful emotions, and to impress upon the sensitive mind the truth of the poet's reflection:

" Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay."

If the planters of Alabama would prevent the shameful decadence of agriculture so palpable in Virginia and the Carolinas, they must banish the wild illusion which holds them spell-bound to the changeless, artless, exhausting culture of the cotton plant. They must abandon a system which is at war with nature and condemned by experience, and adopt such improvements in their mode of tillage, and such restoratives of their worn out lands, as science may suggest and skill may devise. They must learn the physical fact that all nature loves a change, and diversify their field labor by the introduction of other plants.

We must develop the great and various bounties which munificent Nature has provided. Blessed with a mild and genial climate, with alternate highland and lowland, mountain and plain, of fertile and various soils, admirably adapted to the growth of many grains and grasses, and the rearing of stock, why should we go to Tennessee, Kentucky, or Ohio for our flour, our horses, and our pork? Coal, which continues the chief source of English wealth, and in developing which within her own limits Pennsylvania has expended more than \$20,000,000—which adds more to man's comfort than any other mineral, and repays labor better than any other article of trade—exists in exhaustless strata in many parts of the State, but has not been developed by the hand of industry, or fully explored by the eye of science. Iron ore, of excellent quality and in abundant quantity, lies unsmelted, in close proximity to coal, wood, and water, while we buy of other States even our axes and hoes. We have timber trees as various and valuable as any country possesses—the ash, the husbandman's tree; the oak, the father of ships; the pine, equal to that of Norway; poplar, superior to that of Holland; and cedar, as durable as that of Lebanon; and yet, notwithstanding the great quantity of timber annually exported from the United States to foreign countries, and from southern to northern States, for manufactures, millions of acres, covered with these indigenous materials of wealth, lie unsold at \$1 25 per acre; and noble forests are destroyed by fire and the axe, merely to make way for the ploughshare. We have marble of finer grain, more alabaster whiteness, and more variegated beauty, than any in New England; indeed, it was seriously contended by some that the block Alabama contributed to the Washington Monument was Italian; yet the marble mantel-piece, or table-slab, with which taste

decorates the dwellings of the living, and the column, or obelisk, which affection rears in memory of the dead, are brought from Boston or New York. The prodigal waste and destruction, the insensate neglect and disuse of the materials of comfort, luxury, and wealth which lie around us, would excite the scorn or commiseration of an enlightened citizen of Massachusetts. Could a son of that barren land and rigorous clime, who was ignorant of the topographical features, soil, and climate of our State, and of the domestic history of her people, be translated on Dædalian wings, from his home of rock and ice, to the top of one of the mountains of Alabama, and thence survey the valley of the Tennessee, the Coosa or Cahawba, he would be enchanted with the comminged beauty and grandeur of the scenery. When told of the fertility of the soil and its many products, the richness and variety of the mineral ores, the number and gigantic growth of the timber trees, the numerous and rapid streams that emptied into our majestic rivers, the many and different mineral waters and their medicinal virtues, the mildness and brevity of our winters, and the length of our summers, moderated by frequent showers and balmy breezes, he would congratulate a people blessed with such munificent gifts of Providence. Surely, methinks he would exclaim, never was there a lovelier or better land, save that of promise, which burst upon the enraptured vision of the holy prophet from the summit of Mount Pisgah! Should he, however, be told of the abandoned fields, the forests destroyed by fire, the unworked coal and metallic ores, the waste waterfalls, the unfrequented mineral springs, the deserted villages which he would discover on traversing the country ; of the failure of the planters to make their food and clothing, and of the annual emigration in search of other lands, with surprise and indignation he would ask, Why are these things so? What more is wanted to make these people prosperous and happy? Why are they discontented with their lot, and why do they neglect the means of attaining all earthly they desire? The answer is as simple and satisfactory as the question is natural. The reward is deemed inadequate to the labor necessary to the enjoyment of these bounties ; there is no convenient market for the productions of such labor, and no trade to nourish the industry, or accumulate the capital requisite for their development. Our people are confined, by education, by custom and by habit, to tillage of the earth after a vulgar fashion, for a single purpose, the growth of cotton. This only they regard worthy of their time and attention, and this alone occupies all their thoughts and absorbs all their energies.

IS SLAVE LABOR IN THE CONSTRUCTION OF SOUTHERN RAILROADS TO BE PREFERRED TO FREE LABOR?*

I think the answer should be in the affirmative, and that owned by the road. Most of the railroads in the United States have been built by free immigrant labor ; and it has led to the belief that the work requires more skill than can be expected from ordinary slave labor, and this has been a great and an expensive error. There is necessary to either labor the same skill to place and direct, and the same persevering attention to the faithful execution, but really the great work is *mere* labor. The objection to white labor is that it cannot be applied during the heat of a long summer and autumn, and is liable to interruption from sickness and uncongeniality of constitution and temperament, and that it is much more expensive. It is an indisputable axiom that below 33° of latitude a white man cannot stand labor in the open air for above eight months in the year, at any rate it is so with our usual workers who are foreigners. The Panama railroad commenced the experiment with whites and ended it with blacks from Jamaica. I shall say no more, and rest this truth to the general experience here. This labor, if practicable, should be by slaves to be owned by the railroad company, as cheapest and best ; the negroes according to their suitability to be placed in the blacksmith's shops, the carmaker and wheelwright shops, the building of stations, and the mason's work on the culverts and viaducts, and the remainder to the other works of the road—a negro confined to single employment is infinitely more efficient than in a diversity of occupations. In this arrangement there would be present profitable use, and a useful class of blacksmiths, wheelwrights,

* Alabama Planter.

carpenters, and masons, trained to the various wants of the road by the time it would be completed. These remarks are equally applicable to the Mobile and Ohio railroad, and if it does a business anything like what may be expected from it, it will require at least the use of one hundred prime men fully employed to keep it in operation. This, I think, would be the most advantageous and economic application of funds. If, however, subsequent experience should show that the care of the road after its completion would be better under free or contract labor, the negroes would always command a higher price when skilled than their cost. Their use in constructing the road would be for the interest on their cost over their expenses, and one half of their wages could not be so little as that interest. Can this be done? The answer must come from one acquainted with the fiscal concerns of the company, of which I am entirely uninformed. I will, however, make a suggestion of what I think the smallest amount that may be required. If it was double this, the charge for superintendence, &c., would be in relative proportion much less. The cost of 200 negroes in the usual gangs* would be about one hundred thousand dollars, and this should place an efficient force of one hundred workers, or as many as will make it so, into the railroad use, and leave enough on the company's farm to pay their expenses and the interest on their cost. If this is correct, the 100 workers should pay their interest, say \$8,000, and \$5,000 for all their expenses, say \$130 each, or collectively, thirteen thousand dollars. This, I think, can be done, and will be found to be under one-half of the present prices paid.

The application of this labor to the various wants of the road will require the superintending care of the president as now, and requires no remark. There may be some required as to the use of the inferior force of eighty head or more of women, children and the infirm, who will be worked on a provision farm, convenient of access to the road. This force, also, should be worked under the general superintendence of the president, to be assimilated in management to our usual farms under an overseer to be appointed or removed as he may see proper. This farm may do something towards the supply of provisions for the wants on the road, and the mules and other stock when not in use, and some unexpensive depository is wanted.

The above, with some changes in the price of transportation of the larger articles, as an inducement to give labor that direction, I think the road will not be long in feeling the benefit of.

I am aware of the fact, and admit its general trouble, that companies will not manage as well as individuals, but this is equally true of everything else, and there is nothing of value can be done that is not liable to some objection, and this, perhaps, as little as any other. The motive for this communication will, I think, take from it the appearance of fault finding, or the presumption of dictation. It was commenced to be general, but has imperceptibly become particular. I will keep for another communication the inquiry whether if the company cannot make the purchase, how far a private company could do the same thing, and hire their hands to the road.

Since writing the foregoing, I see that Mr. Morse, the State engineer of Louisiana, having under charge about one hundred negroes engaged on the river works, computing them as costing the State near two hundred dollars for expenses, and yet yielding a profit over white labor per annum of from \$23,000 to \$37,000. The extract is thus: "There is, however, one item not taken into the account, and that is the fact that negroes in this climate will, for the year round, perform much more labor than an equal number of white men. I think the difference is about two to three, or that twenty negroes will perform as much hard labor as thirty white men, which would increase the difference in favor of slave labor from \$23,422 to \$37,475 per year. The last difference is not alone owing to the fact that the negroes can work on during the sickly season, while many of the white laborers fail, but to the fact that they are better laborers, generally, and, in my opinion, do actually perform one-third more work. See *De Bow's Review* for August, 1855, page 195.

A PLANTER.

* I have made the estimate on the purchase of negroes with their families in the gang as the dictates of propriety and humanity as well as all experience show. If you expect labor you must make them comfortable.

THE LAMPAS IN HORSES.

A correspondent of the New York "Spirit of the Times" inquires as to the burning for the lampas, and whether that was the only cure for it. With the hope that we may perhaps save one horse from the unnecessary and terrible torture of the burning iron, we undertake to reply.

Burning for the lampas is as good and humane a remedy as is suffocation between two feather beds for hydrophobia. Both have been practiced by the ignorant, and both are effectual. The horse, to be sure, survives the infliction, while the feather bed patient is bound to die. Both of these barbarous remedies (?) have long been discarded by civilized and intelligent men.

We have occasionally had cases of this complaint in our stable, and have always attributed it to over feeding. But in no single case, however bad, within our knowledge and experience, has it resisted a course of bran mashes, continued for a day or two, with the addition, in one or two instances, of a purgative of salts or aloes. (The first thought of our farm hands always was to take the animal to the blacksmith's to be burned.)

Youatt says: "The bars occasionally swell and rise to a level with and even beyond the edge of the teeth. They are very sore, and the horse feeds badly on account of the pain he suffers from the pressure of the food on them. This is called the lampas. It may arise from inflammation of the gums, propagated to the bars, when the horse is shedding his teeth—and young horses are more subject to it than others—or from some slight febril tendency in the constitution generally, as when a young horse has lately been taken up from grass, and has been over-fed or not sufficiently exercised. At times, it appears in aged horses; for the progress of growth in the teeth of the horse is continued during the whole life of the animal. In a majority of cases, the swelling will soon subside without medical treatment, or a few mashes and gentle alteratives will relieve the animal. A few slight incisions across the bars with a lancet or penknife will relieve the inflammation and cause the swelling to subside; indeed, this scarification of the bars in lampas will seldom harm, although it is far from being so necessary as is supposed. The brutal custom of the farrier, who scars and burns down the bar with red hot iron, is most objectionable. It is torturing the horse to no purpose, and rendering that part callous, on the delicate sensibility of which all the safety and pleasure of riding and driving depend. It may be prudent, in case of lampas, to examine the grinders, and more particularly the tusks, in order to ascertain whether either of them is making its way through the gum. If it is so, two incisions across each other should be made on the tooth, and the horse will experience immediate relief."

In lancing the gum for a coming tooth it is much better to nick the gum at the side rather than upon the edge above the advancing tooth. This is practiced with young children by most physicians. Any one troubled with a tender and swollen instep can comprehend the rationale of this. If he cuts his boot upon the point of pressure, he finds the boot puffing up more and more, but when he makes a few incisions on either side of the boot, near the sole, the pressure ceases, and his instep is at once relieved.

PRACTICAL FARMER.

We wish every farrier and blacksmith in the land who has been guilty of the barbarous practice of mutilating the mouths of horses with a hot iron for the cure of lampas, would read the foregoing, and be convinced of the ignorance under which he has labored.—*Southern Cultivator.*

HOW TO PLANT A TREE.

[We take the following excellent rules from the descriptive catalogue of "Selected Fruit Trees," cultivated and for sale at the Michigan Nursery, at Kalamazoo, by Hull & Baker:]

"As our interest demands that every tree sent from our establishment should be transplanted in the very best manner, (for it is in this that the reputation of a nursery in a measure depends,) we deem it necessary to give a short chapter on this subject. Many persons plant a tree as they would a post; they do not consider that a tree is a nicely-organized production, as surely affected by good transplanting as an animal is by good keeping. In planting an orchard, first let the ground be made mellow by repeated and deep ploughing, and then observe the following rules:

" 1. It requires two persons to plant a tree properly.

" 2. The holes for receiving the trees should be sufficiently large [and deep] to admit the roots entire, without bending or crowding them.

" 3. Trees should never be planted more than an inch or two deeper than they were in the nursery. Deep planting is often fatal, and always injurious, [though the subsoil should be thoroughly broken up, say to the depth of three feet.]

" 4. All broken or bruised roots should be cut off smoothly, with a sharp knife, on the under side, and be sure and shorten in and thin out the branches to correspond with the roots, so as to restore the tree to a proper balance.

" 5. Let one hold the tree upright while another person is gradually distributing the earth among the roots. The main secret lies in carefully filling in the mould, so that every root, and even the smallest fibres, shall meet the soil; and to secure this, let the operator, with his hands, spread out the small roots and fill in the earth nicely around every one. Shake the tree gently while the filling is going on. Nine-tenths of the deaths by transplanting arise from the hollows left among the roots of the trees by a rapid and careless mode of merely shovelling the earth around them.

" 6. After the tree is thus planted, press the soil gently but firmly with the foot. Water is not often necessary, although it is an excellent plan (if the roots are dry) to wet them before planting; and if it should be very dry for ten or twelve days after planting, one generous supply of rain or pond water may be beneficial, if some litter is placed around the roots at the same time.

" 7. Trees planted in the fall should not be watered; the autumnal rains will be all-sufficient.

" 8. If the trees are likely to be thrown out by the frost of the first winter, throw up a small mound of earth about the stems; or, if in the orchard, plough it so as to turn the back furrows up to each row and remove it again in the spring. [If the orchard be properly drained as orchards should be, there will be no danger or trouble from the frost.]

" 9. If your soil is not good, remove it from the holes and substitute good garden (or forest) mould; always remember that plants must have food. By enriching and improving the soil by good compost, five times the common growth may be realized. No one can reasonably expect that young trees will thrive in old sod land, but when a young orchard must be kept in grass, a circle should always be dug around each tree, covering the extremities of the roots. Cultivation of the land will cause the trees to grow more in five years than they will in ten years when it is allowed to remain in grass.

THE STATE AGRICULTURAL SOCIETY.*

Mr. Winthrop, in a speech at the banquet of the great Agricultural Fair of Boston, mentions that our State Agricultural Society was one of the first established in the Union. Is not this an additional incentive to our exertions to make it permanent? We hope our citizens will come forward liberally and endow it. Yesterday we noticed that thirty-nine gentlemen of Boston had subscribed \$500 each, and Mr. Winthrop and Mr. Wilder \$1,000 each, to the society in Massachusetts. It seems that Pennsylvania, South Carolina, and Massachusetts had the first State Agricultural Societies.

" You have called me up in connexion with one of them, 'The Massachusetts Society for the Promotion of Agriculture,' of which my excellent friend at my side (Hon. J. C. Gray) is President. That society, founded in 1792, has done much, and is still doing much. Its stock are hardly second to none in your pens this day. Its premiums are at this moment stimulating the invention of the whole country to furnish us with even a better mowing machine than those which have already been the admiration and wonder of the Crystal Palaces of both England and France. And I believe we shall have a better.

" I would be the last to rob this old society of any of its rightful laurels; but I am afraid I cannot insist on its being called the oldest State society in the country. The first American society of all was undoubtedly the Philadelphia society, to which you have just alluded, of which our own Timothy Pickering was the original secretary; and it is a most agreeable coincidence that this earliest American association, for the formation of this great American interest, had the same birthplace with both the Declaration of Independence and the Constitu-

* From the Carolinian.

tion of the United States. This was a city or county society. But in examining the minutes of this time-honored institution, (as printed in 1854, and kindly sent to me by a Philadelphia friend,) I found, somewhat unexpectedly, evidence that a much earlier State society was formed than that of Massachusetts. The Philadelphia Record of December 5, 1785, sets forth that a letter was received 'from Hon. William Dayton, esq., chairman of the committee of the South Carolina Society of Agriculture, enclosing a few copies of their address and rules, and soliciting correspondence with this society.' This letter was dated November 2, 1785, and leaves no doubt, therefore, that South Carolina had established a State agricultural society at least some years before Massachusetts.

"It is certainly a striking circumstance that the year of its establishment was the very year in which the first five bales of cotton ever exported from America were entered at Liverpool; and were actually seized at the custom-house, I believe, on the ground that no such thing as cotton had ever been grown, or could ever be grown in America. Indigo was then the staple of Carolina, of which hardly a plant is now found upon her soil, and of which not a pound is exported. Allow me, Mr. President, in alluding to some of these facts, to propose to you as a sentiment for this occasion :

"Pennsylvania, South Carolina, and Massachusetts : The pioneers in the great cause of American agricultural improvement, with George Washington as its especial patron; may common memories of the past, and common interest in the present, and common hopes for the future, ever bind them together in the same glorious brotherhood."

CURIOUS PLANTS.

Almost everybody has heard of the wonderful walking leaves of Australia. For a long time after the discovery of that island many people really believed that the leaves of a certain tree which flourishes there could walk upon the ground. The story arose in this way :

Some English sailors landed upon the coast one day, and after roaming about until they were tired, they sat down under a tree to rest themselves. A puff of wind came along and blew off a shower of leaves, which, after turning over and over in the air, as leaves generally do, finally rested upon the ground. As it was midsummer and everything appeared quite green, the circumstance puzzled the sailors considerably. But their surprise was much greater, as you may well suppose, when, after a short time, they saw the leaves crawling along the ground towards the trunk of the trees. They ran at once for their vessel, without stopping to examine into the matter at all, and set sail away from the land where everything seemed to be bewitched. One of the men said that he expected every moment to see the trees set to dance a jig. Subsequent explorations of Australia have taught us that these walking leaves are insects. They live upon the trees. Their bodies are very thin and flat, their wings forming leaf-like organs. When they are disturbed, their legs are folded away under their bodies, leaving the shape exactly like a leaf, with its stem and all complete.

BOOK NOTICES.

1. "*Mortimer's College Life*:" by E. Jellay, author of "*Louis's School Days*," &c.; with illustrations. New York; D. Appleton & Co., 346 and 348 Broadway. 1855.

2. *Clouds and Sunshine and Art: A Dramatic Tale*; by Charles Reade, author of "*Peg Woffington*" and "*Christie Johnstone*." Boston; Ticknor & Fields. 1855.

We are indebted to the publishers of the above books, of which we give the titles in full. They are very readable, and will no doubt satisfy the popular taste in this department of literature.

We have received from Dr. E. D. Fenner, of New Orleans, a copy of a

pamphlet prepared by him upon the subject of the yellow fever epidemic at Norfolk. Dr. Fenner is an expert medical writer, thoroughly familiar with the subject of yellow fever. He remained some time at Norfolk during the prevalence of the epidemic, and he enters in this pamphlet very fully into the history of its progress and phenomena.

We have also received a copy of a pamphlet upon the subject of a "Grand Junction Canal," to connect the waters of the Mississippi and Lake Borgne. It is our purpose to notice and extract largely from this pamphlet in our next number. The matter is certainly one of great importance.

